The Landscape of Digital Citizenship Education in Canada from Grades K-12: Online Privacy Education

By

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Contents

Chapter One: Introduction and Task Descriptions

In recent years, the availability of digital devices, tablets and other media has significantly increased which has led to a series of transitions in all of social and professional life, including how we teach and learn. The use of digital devices in educational settings has evolved from separately facilitated Information and Communications Technology (ICT) classes to being integrated into almost every subject with which a student comes in contact. In Canada, many curriculum documents are calling for an increase in ICT use within lessons, student worktime, assessments and evaluations. As ICT is becoming more and more integrated into the educational experiences of students, so are the risks associated with its use such as the insecurity of privacy online. Keeping personal data and identity safe is crucial in not only minimizing risks of cyberbullying, cyber predators, phishing, and exposure to scams, but also potentially harmful digital footprints that may re-emerge later in life. These risks can affect students immediate wellbeing as well as have long-term effects.

These risks result in an immediate call for digital citizenship frameworks that will support students in using the new technologies ethically and safely, while also teaching them how to use these tools to participate constructively in their communities and society at large. The urgency in the need for updated digital citizenship frameworks is what inspired the research that has come together to create this portfolio. Though the focus of this research has been centred around online privacy and safety for students between the grades of K-12, it falls under the broader umbrella of digital citizenship. To begin implementing an adequate digital citizenship framework for our times, investigation of currently available educational curricula as well as third party initiatives must be conducted. This research was completed for the Office of the

Privacy Commissioner of Canada, through the completion of two commissioned research reports. Two major research papers were written, the first focusing on Canadian curriculum and professional development and the second undertaking a deeper and more detailed evaluation on existing Canadian educational resources. This overview of Canadian curriculum and professional development materials and initiatives, as well as a detailed evaluation of Canada's existing educational resources from provincial and territorial education ministries and school jurisdictions, demonstrates the current landscape of current digital citizenship education in Canada. Dr. Michael Hoechsmann, and I co-authored the first research paper.

Privacy Policy and Practice: A Review of Provincial Curricula in Canada (Hoechsmann & Dyszlewski, 2016), began with a detailed review of all available curriculum documents for each province and territory. Research was conducted for each province and territory individually, and once completed the results were then compared. Data were gathered not only from curriculum documents, but also from any available third-party resources and initiatives, as well as any professional development material that was relevant. The research was completed in three stages (completing the research three times from start to finish), in the hopes of minimizing possible missed information. Once all relevant information was collected from each province and territory, the research was compared through the creation of a life-sized comparison chart within a reserved classroom at Lakehead University. With the use of this organizational technique, all information could be printed, clearly displayed, compared and evaluated accordingly. Various charts were created to track usage of certain third-party initiatives by different Canadian education jurisdictions as well as the most utilized professional development resources. All of the research gathered for this first research paper laid the ground for the research conducted for the second research paper. My efforts account for 50% of the research for

this paper as well as the writing portion. *Privacy Policy and Practice: A Review of Provincial Curricula in Canada* can be found in Appendix A.

The second research paper was co-authored by Dr. Michael Hoechsmann and Dr. Meridith Lovell-Johnston. The research for this paper, *Where and How Does the Personal Data Protection Competency (PDPC) Framework Fit in Canadian Educational Resources?* (Lovell-Johnston & Hoechsmann, 2018), reviewed resources were split into English and French language resources, as further research of resources in the first paper brought to light valuable English and French data. As a result, all English resources were compiled and analyzed by me while French resources were analyzed by Maximilian Hayes, who provided translation of French curriculum and third-party resources relevant to Quebec. Since this paper required a more detailed research approach and analysis, there were five stages. First, we reviewed the resources compiled for the previous paper and ensured all were current, as well as adding any new resources that had been newly developed. Then two stages of research and investigation were completed in which all relevant references were reviewed two separate times to minimize possible missed information. Once the first three stages were completed, results were compared in chart form, so that within stage four the similarities and differences from the provinces and territories could be more readily accessible. This chart was created on a presentation board to make initial information organization and analysis more efficient and enable rapid reorganization when necessary. Once the physical charts were completed, the information was transferred into digital form and checked for accuracy, and these results are presented in the contents of the second paper. Stage five consisted of comparing existing educational resource information to the *Personal Data Protection Competence (PDPC) Framework for School Students* (2016), prepared as a result of the International Conference of Privacy and Data Protection Commissioners. The intention of

this comparison was to determine whether the PDPC competencies were addressed in Canada's existing educational resources from provincial and territorial education ministries and school jurisdictions. With this information we outlined best practices for the inclusion of these competencies. A second intention was to determine whether there were any gaps in Canadian educational resources, in reference to the competencies. Outlining possible gaps would greatly benefit educational resource development as well as aid Canadian students in learning to protect their personal data, exhibit safe online safety practices as well as become successful digital citizens. The nine competencies of the PDPC are: Competency 1- Personal Data; Competency 2- Privacy, civil liberties, and protection of personal data; Competency 3- Understanding the digital environment – technical aspects; Competency 4- Understanding the digital environment – economic aspects; Competency 5- Understanding personal data regulations and legislation; Competency 6- Understanding personal data regulations: Controlling the use of personal information; Competency 7- Managing my data: Learning to exercise my rights, Competency 8- Managing my data: Learning to protect myself online; and Competency 9- The digital world: Becoming a digital citizen (International Conference of Privacy and Data Protection Commissioners, 2016). My efforts as the primary research assistant account for 25% of this paper. *Where and How Does the Personal Data Protection Competency (PDPC) Framework Fit in Canadian Educational Resources?* can be found in Appendix B.

Glossary of Terms Used in this Portfolio

The following terms have been defined as they pertain to the overall focus and goal of this portfolio.

Digital Literacy is the ability to utilize digital technological platforms in accessing, creating, finding and communicating information which can be found in the internet. It involves the use of an individual's cognitive and technological skills. Digital literacy is an overarching term which categorizes topics that encompass the usage of digital technology.

Digital Citizenship refers to the ways in which individuals engage and participate in the online environment when using digital technology. A participant who possesses the skills to effectively engage with the online society is critical, confident and equipped to make reasonable decisions when faced with a variety of circumstances online.

Digital Citizenship Education refers to the ways in which digital citizenship is taught to current and potential digital technology users. When utilizing digital technologies, these participants become citizens of an online world which requires knowledge and practice of numerous behavioural norms or conventions for this citizenship to be beneficial and successful.

Digital Identity is information concerning an individual, organization or any other entity that exists entirely online. These identities can be created by individual users or can be altered by those participating in online environments. These identities cannot be permanently erased and may remain forever within the online world.

Interpersonal Impacts refer to both positive and negative consequences of online engagement which influence interpersonal relationships in both the online and physical world (ex. cyberbullying).

Online Privacy refers to the level of security practiced in regards to an individual's personal data on the internet. Online Privacy is an overarching term, referring to a variety of privacy techniques and technologies that which are used to protect sensitive and private

communications, data and preferences of an individual user. Online Privacy is also known as Internet Privacy.

Protection vs. *Empowerment* refers to the ways in which an individual is protected from or empowered to act when faced with a potentially dangerous situation online. Specifically, in terms of digital technology usage, it pertains to whether individuals are being sheltered from encountering potentially dangers or whether they are taught to critically respond in such circumstances.

Chapter Two: Review of the Relevant Literature

Introduction

There is an incredible demand for Information and Communication Technology (ICT) access and usage in Canada. These technological means of internet access are not only a part of Canadians' personal lives, but are also regularly used in many businesses, public/community areas, and within educational institutions. Through technology curricula and educational policies, students are being encouraged to utilize technological methods not only to support their coursework, but also take part in the digital communities that exists on the internet. Likewise, educators are being encouraged to bring technological experiences into classrooms and facilitate today's lessons in a manner that reflects our technologically-centered society. With this push for active online participation, we have become not only citizens of our countries, but citizens of a boundless digital world as well. As students continue to participate in various online communities and environments, it is necessary for education to support and prepare students to be engaged, competent digital citizens. As a result, this literature review will explore the reasons why digital citizenship education is of great importance for the present-day student. I will be

exploring the reasons behind the importance of educating students about digital citizenship, the risks of inadequate digital citizenship education, and addressing areas for further research on this topic. To synthesize this research in these areas, the following topics will be discussed: the importance of educating students on digital citizenship, the implications and risks associated with inadequate digital citizenship education, and the areas where students require the most guidance based on current trends. Further steps for research in this area will also be considered.

The Importance of Digital Citizenship Education

Due to the boom in technology access and usage, students have nearly instant access to immense amounts of data, which previous generations did not. Education is becoming more and more reliant on digital technology access than ever before, creating an incredible need for digital citizenship education to guide students to critically analyze information, interact safely with others and protect their privacy. Yet what is digital citizenship and why is it so important that students learn how to be digital citizens? Young (2014) defines digital citizenship as it applies to student usage and understanding: digital citizenship is "how a person conducts him/herself while using digital tools. Students must understand how to navigate the internet safely and communicate effectively using digital tools" (Young, 2014, p.10). Jones and Mitchell (2015) similarly define digital citizenship by stating that it is comprised of the "concepts of responsibility, rights, safety, and security" and suggest that it is broken down into following topics: "internet safety, privacy and security, relationships and communication, cyberbullying, digital footprints, reputation, self-image and identity, information literacy, and creative credit and copyright" (Jones & Mitchell, 2015, p.2064). Though a conceptual outline of digital citizenship has formed, Jones and Mitchell's (2015) article focuses on student safety through

peer-to-peer engagement while Young (2014) focuses more heavily on how an individual uses digital tools online.

Current stereotypes propose that young students are the experts in technology use and that they are more likely to grasp new technologies or changes that come their way. Prensky (2001) states that students raised in the digital age are in fact skillful in consuming, creating, absorbing and navigating through this digital world. Prensky's (2001) work proposes that individuals who are "native speakers" of the digital language and were raised in a digitally-centered age, thus considered as "digital natives", are fascinated by and adopt new concepts of new technology quickly. Although Prensky's (2001) work does prove useful in better understanding digital natives' use of technology, Orth and Chen (2013) suggest that even though we call members of the current generation "digital natives", students are constantly in danger of being overwhelmed with unfiltered digital data from around the world and not having appropriate skills and strategies to filter, determine relevance, and establish truthfulness. Specifically, being considered "digital natives" does not mean that students have a community-wide understanding of the norms, rules of behavior and engagement, and common practices of what is expected in the digital world (Orth & Chen, 2013). Young (2014) aligns with Orth and Chen's (2013) position and adds to it by stating:

> I often hear teachers refer to kids as 'experts' when it comes to using technology. I disagree. While they are great at navigating a new app or figuring out how to use the latest gadget, kids are not experts when it comes to properly communicating and ethically handling everything that goes along with using digital tools… I've seen that kids don't understand what a digital footprint is. (p. 9)

As a result, it is evident that students may appear to be the experts in technology use when it comes to navigation through new available technologies; however, many lack fundamental digital communication, and citizenship skills to be able to successfully and safely participate in the online world.

Successful and safe online participation, as well as digital citizenship skills, are not the only concerns for researchers examining current online communication trends. Minjeong and Dongyeon (2018) suggest that as students are maturing, they begin to construct their self-identities, usually during adolescent years. As students' self-identities mature, they would benefit from establishing their value and identity for digital citizenship (Minjeong & Dongyeon, 2018). Beyond educating students on the issues of internet safety which are currently prominent, the authors argue that students need to expand their capabilities to understand what the future digital world holds through developing comprehensive digital citizenship skills. Jones and Mitchell (2015) identify the same necessity and continue by stating that digital citizenship education must consist of more than simple digital literacy skills and current digital issues such as cyberbullying prevention.

From the literature above, there are a number of important issues for educators to consider. First, it is evident that digital citizenship education must consist of a variety of educational topics to ensure students are prepared to be successful current and future digital citizens. Second, there is a lack on consensus amongst literature about whether students are indeed experts in digital usage or whether current digital citizenship education is leaving students unprepared for their unavoidable roles as citizens of the digital realm. Regardless of the stance taken by various literature, whether students are the experts or lack foundational knowledge, current methods of digital citizenship education may be leaving students unprepared as future

participants of the digital world. It is also clear that the majority of the literature does strongly support the inclusion of an integrated approach to digital citizenship education. As a result, it is apparent that there is a great need for digital citizenship education to not only educate students on how to be citizens of the digital world today, but also how to appropriately navigate through situations which will arise in the future.

The Result of Inadequate Digital Citizenship Education

As students and educators in any setting, it is vital to understand not only the benefits but also the risks associated with the tools we use. As technology becomes less of a casual tool and more of a day-to-day reliance in classrooms, it is necessary to understand the types of skills, habits, and mindsets that will enable students to fully and appropriately immerse themselves in the digital world. In the case of digital citizenship specifically, it is important to understand the effects that inadequate education may have and understand why it may be happening in the first place. Cupit and Ey (2011) state that the internet, though an amazing resource, is unregulated, hard to control, and full of potential places that put students at risk for exploitation. Cupit and Ey (2011) measured the amount of information that students, 5 to 8 years of age, could provide about the risks associated with the usage of various digital media. Some of the students could name some of the risks; yet, "when presented with potentially dangerous internet interactions [,] almost half were not able to identify the associated risks" (p.53). Cupit and Ey (2011) also discovered that most students "identified appropriate management strategies; however, it was evident that children could not safely employ these because they were unable to recognize potential dangers" (p.53). Similarly, Harris (2010) states that students suffer from a disconnect between what it means to post something online that may hurt them in the future and knowledge of who they can and cannot trust. Harris (2010) continues by explaining that, "this is not just

technology or even content we're talking about, as we all know. It's behavior, or sociality, every bit as much as content" (p.77). Harris (2010) concludes by stating that many younger students are currently unable to make conscious and safe decisions when interacting with the virtual world and as a result education must fill this need.

Gleason and Gillern (2018) provide a deeper understanding of the reality of student internet use as well as the necessity for skill development. Gleason and Gillern (2018) state that:

> as students increasingly spend large amounts of time online (e.g., an average of six hours of screen time per day, excluding school and homework), it is critical that they are developing skills enabling them to find, evaluate, and share information responsibly, engage in constructive conversation with others from diverse backgrounds, and to ensure their online participation is safe, ethical, and legal. (p. 200)

Gleason and Gillern (2018) explain that a lack of adequate digital citizenship education creates the potential for students to become victims of the dangers of online usage. These dangers can include the chances of cyberbullying, identity theft, exposure to cyber-predators, as well as the risk of long term consequences as a result of digital footprints. Reports of the results of exposure to these risks are also becoming quite prevalent in media stories and are receiving a great deal of attention as a result. There are many current high-profile examples from Canadian media that provide an excellent example of the risks and consequences associated with inadequate digital citizenship education. Gleason and Gillern (2018) reference the Slenderman story as an example of possible repercussions and dangers. In 2014, two girls who were 12 years of age, were so taken by the fictional character, Slenderman's persuasive online presence that they believed they needed to kill someone to earn his respect and attempted to do so. Fortunately, their young victim survived the attack. Although the Slenderman story is an isolated example, there are many

other highly publicized stories that demonstrate other risks and consequences associated with the lack of digital citizenship education. In 2012, a young 15 year old teen, Amanda Todd, took her own life as a result of extreme bullying and cyberbullying. This tragedy truly illustrates a how serious the consequences can be if digital citizenship education is not made a priority as technology use continues to grow and the need for citizenship skills branches out to even more so to include the online world. Amanda's story is unfortunately not alone, as many other similar stories of cyberbullying have been flooding the media. These stories provide us with an understanding of how the need for digital citizenship education has become not only current, but urgently necessary. The Slenderman story, the Amanda Todd story, and many others similar to these were highly publicized and as a result, the dangers of the online world became even more so an immediate concern for educators, parents, and students. Not only are students facing dangers within the digital world such as with cyberbullying; yet, they have the power to cross over and potentially create real-world harm in a variety of ways.

With digital citizenship education being such a necessity for twenty-first century students, it is important to try and understand where its current inadequacies originate and why that is. There are a variety of opinions on current educational methods of digital citizenship. Minjeong and Dongyeon (2018) state that current digital citizenship education contains too general of a focus and, as a result, teachers do not have clear criteria for educating students to have strong digital citizenship skills. Minjeong and Dongyeon (2018) argue that because digital citizenship has become such a broad topic, educators are overwhelmed and unprepared in teaching students the necessary skills. Minjeong and Dongyeon (2018) add that there is an importance in fostering not only actively participatory citizens of the digital world, but also fostering self-identity. Thus, *digital citizenship education* needs to be differentiated from and

more in-depth than simple digital literacy education and cyberbullying prevention, which is a concept that Jones and Mitchell (2015) have also discussed (Minjeong & Dongyeon, 2018). Hillman (2008) states that the Canadian school curricula similarly show little regard for the issues surrounding online education. Hillman (2008) proposes that if online education is to be an important educational component of critical literacy, a place must be created for it within provincial curricula and, until a place is made, educators will not have the appropriate support necessary to address these issues.

Young (2014) provides a different outlook on the digital citizenship education debate and focuses more closely on teachers making the mistake of assuming that students are the experts when it comes to understanding technological issues and allowing students to be leaders in their own digital citizenship education because they may appear to know more than the teacher. Young (2014) states "as digital natives, this is the only world that our kids know, and understanding how to effectively navigate it is essential to their success" (p. 12). Davis and James (2013) similarly state that educators assume that students are the experts and, as a result, the topics that educators discuss with students on digital citizenship issues are quite narrow. Students in these studies reported that the most frequent messages they received about digital citizenship encouraged overall prevention and were solely focused on social media usage. Davis and James' (2013) views on digital citizenship education being too narrow is of interest due to the fact that Minjeong and Dongyeon (2018) argue that, in fact, the spectrum of topics covered was too broad to be adequate.

Agosto and Abbas (2015) have yet another perspective on the landscape of current digital citizenship education. They discuss that schools are focusing on warning and protecting students away from any possible risks of the virtual web rather than educating them how to use this tool

in a smart way. As a result, students are being disciplined for inappropriate and inadequate digital citizenship behaviours and not supported to learn appropriate behaviours, which closes the door to empowerment education. Instead, educators would be more effective by teaching students to become smarter and safer social media users (Agosto & Abbas, 2015). Krutka and Carpenter (2017) have the same perspective on the issue but add that as a result of schools banning digital usage in response to inappropriate behaviours, educators have begun overlooking their responsibility in providing comprehensive digital citizenship education. Krutka and Carpenter (2017) explain that educators cannot foster citizenship skills without including digital citizenship and that lessons which focus primarily on matters of safety and prevention do little to prepare students for the active future roles they will be taking.

It is evident that there are many different perspectives on the issues associated with current digital citizenship education. Despite disagreements as to the scope and content of digital citizenship education, the quality of current educational practices in preparing students to participate in the ever-developing digital realm continues to be of concern. Whether it is due to the broad or narrow nature of the curricula, the assumption that students are the experts, or whether schools are hindering education through protection-only practices, the argument remains that current digital citizenship education is not adequate to prepare students for their futures as engaged citizens of the digital world.

Digital Usage Trends Among Students

With digital technology usage being so prevalent in today's society, tracking usage trends has become more relevant than ever before. It is important to ask: if students are not learning these skills within classrooms, then where? Is what students are learning positive and supportive of them becoming engaged digital citizens? Are there any current trends? Fleming et al. (2006)

state that "young people are using the Internet in ever increasing numbers with research suggesting that teens are even heavier users than are adults" (p.135). Fleming et al. (2006) also report that students are likely to find online attention quite appealing and "they have a strong desire to form relationships, to belong, and to gain attention, validation, and acceptance", making them more vulnerable to inappropriate behaviors that exploit these desires (p.140). Nehf's (2003) findings aligns with Fleming et al. (2006) and continue to state that those who utilize the internet trust other internet users to protect their privacy and only use their information in ways that will not hurt them. This naiveite leaves users clueless to where their information is ending up. Students' willingness to disclose personal information in exchange for participation in the online community is particularly concerning due to the fact that it demonstrates the ways in which students' digital citizenship behaviours are being shaped, in this case, inappropriately, through membership in social communities online.

It is apparent that students' heavy usage, and the appeal of gaining instant attention, is shaping the ways in which they behave as digital citizens. Livingstone (2008) supports these findings through her study evaluating identity in student media usage. Livingstone (2008) states that although adolescents are focused on their identity and the expression of it, online risks arise when their identity displays endanger their privacy online. These risks can arise from their very confidence that they can proficiently judge, openly trust and freely explore the virtual web and many do not recognize exploitative behaviour happening (Livingstone, 2008). Although Livingstone (2008), Fleming et al. (2006), and Nehf (2003) suggest that the conditioning of digital citizenship behaviours occurs as a result of desired membership, Clemons and Wilson (2015) state that young internet users are engaging in risky and inappropriate behaviors that can be embarrassing or harmful to their futures because they do not know better. As a result,

Clemons and Wilson (2015) propose that students require educational intervention on the nature and causes of inappropriate online behavior. This opposition in findings demonstrates a disconnect amongst literature on digital citizenship education and suggests that additional research needs to be conducted on the topic.

There is evidently a deficiency of digital citizenship education in schools (Davis & James, 2013), and research suggests that students are learning a great deal through their own trial and error (Orth & Chen, 2013). Could digital citizenship education be occurring more heavily in students' homes, alongside parents, as a result of the lack in education within educational institutions? Orth and Chen (2013) found that parents are actually turning to schools to help manage their children's digital lives and do not feel competent in guiding the digital behavior of children. Though this may be the case, Orth and Chen (2013) state that parents have the responsibility to be a part of their children's digital citizenship education. Schools and parents need to build a partnership, making digital citizenship education an essential part of school programs and an extension of learning with parents at home. Like Orth and Chen (2013), Hollandsworth, Donovan, and Welch (2017) have found that digital citizenship awareness is not reaching parents. In their study, parents agreed that technology continues to be vital for their children's education in schools, yet remained ignorant and unaware of the dangers and consequences of what their children are doing online. Hollandsworth, Donovan, and Welch (2017) continue by stating that parents do not think that the online dangers they hear about will ever happen to them or their children, hindering preventative education from happening at home. Hollandsworth, Donovan, and Welch's (2017) findings are a perfect example of why digital citizenship education requires an extension to home education, as Orth and Chen (2013) suggest. Though theoretically this may seem like an ideal arrangement, issues of home technology access

and parent availability become a concern, creating another boundary in digital citizenship education and making the case for focusing on the development of these skills within schools.

Current trends suggest that digital citizenship education may not be occurring successfully, as research shows that students are either unaware of essential information or willing to negotiate appropriate behaviors and participate in potentially harmful behavior, in exchange for membership and involvement. Parents are also looking to schools for guidance on digital citizenship education methods, demonstrating a disconnect between what parents assume students are learning and current educational shortcomings. Consequently, current trends suggest an inadequate level of individual and home digital citizenship education are occurring.

Conclusions and Directions for Further Research

Twenty first century students and educators utilize the digital technologies available to aid in many aspects of their lives. Specifically, in educational institutions, educators are being encouraged to utilize technology in classrooms to support their students' knowledge of the nature of the digital world surrounding them. Some literature suggests that students are in fact the experts in digital usage, but others suggest that they are encountering dangerous situations and exhibiting risky behavior due to the fact that they simply do not know better. This inconsistency in perspective suggests that further research may be necessary to advance our understanding of the current landscape of students' digital technology usage and expertise. An overwhelming amount of literature points towards the necessity for better quality digital citizenship education curricula, due to the fact that current educational resources are not proactively preparing students for their future as engaged digital citizens, but merely reactively attending to current dangers in the digital landscape. Through the evaluation of available literature on the topic of digital citizenship education, it is apparent that students are amongst the highest consumers of digital

technology. Regardless of whether the students are utilizing technological platforms as educational tools or whether they are experimenting and discovering within online communities, they are participating in the digital world and consuming all that is out there, whether positive or harmful, at a constantly increasing rate. Researchers argue that current digital citizenship education guideline are too vague and thus are not supporting educators appropriately, but others argue that because educators believe students are experts, the topics that they teach are too narrow and are heavily reliant on preventative measures.

Although the articles included in this portfolio address gaps in the provincial and third party resources for teaching about digital citizenship, further research is recommended to determine whether educators are appropriately equipped to teach digital citizenship, whether they themselves understand the nature and importance of the topic, and what current gaps exist in current supports (such as curricula and other educational documents) that hinder adequate student digital citizenship skills. Consequently the Office of the Privacy Commissioner, in co-operation with international groups (i.e., at the International Conference of Privacy and Data Protection Commissioners), have identified gaps in students' knowledge and provided guidance about the required skills in a number of domains – in the form of the PDPC. Further research is also necessary in determining the current level of knowledge students have acquired through their "digital native" identities and current immersion in digital technology use, as well as what ways students can be supported to better foster qualities that will enable them to be successful future digital citizens.

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Appendix A: Privacy Policy and Practice: A Review of Provincial Curricula in Canada

Privacy Policy and Practice: A Review of Provincial Curricula in Canada

By Michael Hoechsmann and Agatha Dyszlewski, Lakehead University, Orillia

Table of Contents

Introduction

This overview of curriculum and professional development materials and initiatives in and for Canadian schools on the subject of privacy demonstrates that Canada is marked by an eclecticism of approaches. There is a profound lack of consensus between provincial jurisdictions on how to implement digital literacy and digital citizenship programs and strategies, hence, in Canada's schools, the issue of how to address the role of privacy in the new digital environments is cloudy for the most part.

In some exceptional cases, privacy is included as a General or Specific Outcome in a particular course and hence it is more likely be taught directly, but, in general, privacy is usually positioned as a learning principle or consideration. Often, too, it is attached to other issues in Internet ethics, safety, risks, responsibility, etc. Thus, a solid strategy to promote and ensure the teaching of privacy in schools involves supporting the inclusion of the broader concepts of digital citizenship or cyberethics.

For decades, there has been a tendency in Canada and internationally for lessons in media literacy to be a "hit or miss" affair. Often it comes down to the individual teacher to determine whether a lesson on the subject will be insightful or not. It seems the case that this concern prevails in the teaching of digital citizenship or cyberethics (and hence privacy). When curriculum is created that does not specifically name privacy (or safety, risk, etc.) in the language of the curricular Outcomes, then it is the luck of the draw whether it will be covered (or in what amount of detail).

Nonetheless, as should be reckoned in the context of our digital lives, there is an upswing in the prominence of digital citizenship and cyberethics (hence privacy) in the curriculum. The new BC curriculum (also used by Yukon) includes learning outcomes on privacy and security through the entire K-12 school cycle. It appears that Saskatchewan, Ontario and Quebec are the provinces in which one has the lowest likelihood of learning about privacy in the formal curriculum, especially in the primary grades.

The reviews of the provinces are below. They are ordered from the West (BC/Yukon) to the East (Nflnd.), followed by the North (NWT/Nunavut). Each section is divided in to three categories: Curriculum; Professional Development; and Highlights of Board and Third Party Initiatives.

There are a wide range of initiatives by school boards, teacher associations and 3rd party non-profit or governmental organizations (including the Office of the Privacy Commissioner). These include the production and dissemination of curriculum resource packages and also professional development materials for teachers.

The following table provides an illustration of the distribution of some of those partnership organizations which are playing a part in the teaching of cyberethics in general, and privacy in particular. It was compiled based on the evidence amassed through the many Web searches we conducted of provincial and territorial curricula (see Appendix for full search histories).

Third Party Initiatives

TDNL: The Door That's Not Locked

http://www.thedoorthatsnotlocked.ca/app/en/

	TDNL	Cybertip	Internet101	Media Smarts	Privacy Commissioner	ConnectED	Define the Line	Cyber Safe Girl
ON				√		√		
BC	√							
AB	√	√	√	√	√			
SK	√							
MB	√	√	√	√	√	√	√	
QC		√			√			
NS				√				
PEI								
NB		√						√
NL	√			√	√			√
NT				√				
NU								
YT								

Cybertip!ca

https://www.cybertip.ca/app/en/

Internet 101

http://www.rcmp-grc.gc.ca/is-si/index-eng.htm

Media Smarts

http://mediasmarts.ca/

Office of the Privacy Commissioner

https://www.priv.gc.ca/youth-jeunes/pp/index_e.asp

ConnectED

http://www.reallifeonline.ca/about/Overview.aspx

Cyber Safe Girl

http://www.cybersafegirl.ca/

Define the Line

https://www.mcgill.ca/definetheline/digital-citizenship

Recommendations for Enhancing or Improving the Teaching and Learning about Privacy in Canadian schools.

Based on our review of the Canadian privacy landscape and the specific materials produced by the Office of the Privacy Commissioner, we make the following recommendations or suggestions.

1. Capitalize on the resources already developed by the Office (and review/revise where necessary):

A.*Social Smarts: Privacy, the Internet and You* is a terrific resource. It should be promoted at every opportunity, particularly to middle school teachers and students. It would be a great achievement for the organization and an excellent contribution to the general public if every Canadian youth were exposed to that graphic novel at some point.

Social Smarts is not only informative and inclusive, but it is written/illustrated in a youth-friendly manner.

With its accompanying Discussion Guide, this graphic novel offers teachers a ready-to-implement lesson. This is a good example of the type of classroom resources that the Commissariat could continue to develop.

B. *My Privacy Everyday* is also an excellent resource, but it is far less classroom-ready than *Social Smarts*. Depending how it is further developed, this could be used in middle school or secondary school. *My Privacy Everyday* is very thought provoking and reveals in a very concise manner the multitude of ways that privacy is compromised in a typical day.

Some consideration could be given to producing this as another graphic novel or some other genre of production. It too could benefit from some classroom-ready activity, perhaps a timeline exercise that students could do in the classroom.

C. *Kids' Privacy Sweep Lesson Plan* is excellent and classroom ready. It could benefit from some small group activity to help keep the focus during a class hour.

D. The *Privacy Activity Sheets* could be used for the development of lesson plans for primary school. Using the formula of Minds On, Hands On and Consolidation, these activity sheets could be used for the Hands On component of a lesson. To develop full-blown lesson plans for use in classrooms, further work needs to be done to provide more lead-in and consolidation ideas. Proceeding with backward planning, the curriculum developer needs too to determine the Learning Goals and Success Criteria for the lessons. The various components of a lesson flow from those.

E. The *Presentation Packages* likely need to be discarded, rethought or repackaged. The type of pedagogy implied by a PowerPoint presentation with accompanying questions is more 20th century than 21st century literacy. If they were rethought, components bits could be repurposed as part of inquiry based modules where students would lead the process. There is a possibility too, that these presentations could be repackaged as workshops for presentations in pre-service teacher education or in-service teacher professional development settings. The core content is meaningful and relevant.

F. The *Privacy Quiz* could be built in to a lesson on privacy for middle school or secondary students. This could be used as part of the creation of a KWL chart (Know; Want to Know; Learned) as a Minds On to a lesson on Privacy. This would establish a number of the baseline Knowledge. Students could then be asked what they Want to Know, be sent out to find answers to their questions, and brought back together to share what they learned as a Consolidation.

G. The *Fact Sheets* are useful and could be put to use by educators and students. They should be made more generally available or integrated into lesson plans.

H. The *My Privacy and Me* videos remain a strong resource for youth engagement. They could potentially be used more prominently on the Web site.

2. Develop more curricular resources:

Curriculum materials (lesson plans, perhaps a unit plan) could be written for ICT and digital literacy courses as well as Law classes. Given that much of the digital literacy curriculum in Canada is dispersed across, and infused in to, other subject domains, it would be a wise plan to prepare lessons for the core subjects such as Language Arts, Social Studies and Science. *Social Smarts*, for example, could be used in a Language Arts setting.

3. Develop more media resources:

It would be of exceptional value to the Privacy Office if youth would circulate core messages from the organization over social media. It may be worthwhile to produce some memes that support key messages of the Office that could be launched in to cyberspace. Ideally these will be produced by (at least fairly) young people. We could generate some in my (Hoechsmann*) classes at Lakehead University next Fall. Over recent terms, I have begun to assign memes as an example of 21st Century literacy. Teacher Education students are always keen to list service opportunities on their resumes. If some memes were selected for use by the Office, this should please the authors. (A project like this has double value because the students would have to focus on using their own photos or Creative Commons or other free from copyright material).

Other media to consider are PSAs or other short videos. Our suggestion would be to hold another video contest, but if this has already been tried in the My Privacy and Me video contests, and the ratio of result to effort is not satisfactory, then the idea may have run its course.

Another idea might be to run a meme contest. Memes are easy to produce technically but less easy to produce conceptually so there is some challenge in producing a particularly good one (hence, judges could pick the most clever and compelling memes as prize winners).

4. Improve the Web site user experience at www.priv.gc.ca for educators and students:

The Web site clearly fulfills many functions, but the interface will signify user experience feelings such as bureaucratic, dense, stifling, etc. While it may not be in the best interests of the Office to change the look of the site, some consideration could be put in making a button for educators and students on the home page and then making the next page a bit looser and playful in design principles.

A new button should ideally be under the keyword Sections on the home page, and the font should be a different colour (such as red?) to stand out. Or, if the route to the material for educators and youth remains in the drop down menu (under Looking for Information), consider changing the name so the material appears higher up in the list. Right now, “Youth Privacy” comes dead last in the list of topics. Change the title to “Educators and Students” (or just add that as another button to the same page of material) and the button will appear in the 13th position and visible from the first click.

As for looser and more playful design principles, the page on “Youth Privacy” does have *Social Smarts* icon and button, which as an immediate visual improvement on the more bureaucratic interface, but the Office could go further. There could be some modest redesign, even just adding

a splash of colour on the page backing. Using an icon/button from the Privacy Activity Sheets would signify that there are some educational materials present below the surface.

5. Continue to develop material in partnership with other organizations (usually non-profits, but also education organizations, governmental organizations and corporations):

Given that the various concerns that relate to privacy mesh neatly with many other components of Digital Citizenship and that most provinces are including Digital Citizenship in the curriculum in some manner, it makes sense to find ways to augment, enhance and improve the privacy component of present and future Digital Citizenship or cyberethics initiatives. The non-profit organization Media Smarts* would make a good partner given the reach of their materials, but so would other non-profit organizations with an interest in privacy.

*As a member of the Board of Directors of Media Smarts, the author of this report declares a conflict of interest and asserts that this statement is based on the objective findings of this report. Media Smarts' curricular resources are widely used in Canada.

6. Make materials available to teachers for in-service professional development and potentially make presentations at teacher conferences

Teachers are lifelong learners and professional development is structured right in to their jobs. There is a network of teacher led media literacy organizations around the country. CAMEO is the Canadian Association of Media Education Organizations, but more activity takes place at the provincial level with organizations such as Ontario's AML (Association for Media Literacy http://www.aml.ca) leading the way.

The Edcamp movement http://www.edcamp.org of "unconferences" is a leading source of collaboration and innovation in teacher professional development with digital technologies. As Edcamps grow, the Office should make contacts and share resources. The idea of "unconferences" including Digital Citizenship components is very viable.

7. Make materials available for pre-service teacher candidates in Faculties of Education

As mentioned above (1E), the Presentation Packages could be repackaged as presentations for pre-service teacher candidates in Faculties of Education. When classroom ready materials are received by Faculties of Education, they often circulate them to the professors and instructors for potential use.

Workshops are offered free of charge by some governmental and non-profit organizations whose mandates include dissemination of resources. The Canadian Civil Liberties Association, for example, offers free workshops on an annual basis to Faculties of Education. These offers are not always accepted, but sometimes they are welcomed.

8. Lobby the Council of Ministers of Education, the Canadian Association of Principals and the Canadian Teachers' Federation

The Office has surely made a pitch to Ministers of Education to push for privacy in the curriculum before, but this could continue on a bi-annual basis. The Canadian Association of Principals and the Canadian Federation of Teachers can't drive curriculum change, but they can help to bring greater prominence to the issues of privacy and the involvement of the Office in resource development that supports curriculum and pedagogy.

9. Flip the script

In the early year of the digital revolution in communication and learning, the public perception of the perils of the Internet for young people have tended to focus on individual victims, and potential victims, of cyberbullying or predatory strangers. The topic of privacy extends the conversation of Internet risks to include much more subtle, and far more widespread and common, breaches in to the lives of individuals and groups.

In our view, the umbrella concept of Digital Citizenship or cyberethics is a more productive space for the inclusion of not just the matters relating to privacy, but also just essential 21st century life skills. In other words, if a generation is raised recognizing stranger danger and cyberbullies as the primary or sole risks that the Internet poses, they will not be as world ready as those who understand that there are multiple considerations that should govern online behaviour and practices.

Taking for example the *Social Smarts* and *My Privacy Everyday* resources, students could and should be taught to recognize the myriad ways that they compromise their own security and reputation in multiple ways on a daily basis.

The concept of "digital footprint" is highly generative and would be a good anchor for a cyberethics campaign that includes a strong focus on privacy. Perhaps a meme campaign (see 3, above) could be created using the concept of online privacy as a heuristic for a series of digital footprints (literally the shape of a foot with a thought of the day inside it).

Whatever the case, the discourse of cyberbullying has focused public attention on a particular subset of concerns within the much broader domain of cyberethics and it would be useful to flip the switch to draw attention to the many questions that emerge out of a focus on privacy. People and organizations working in the area of copyright would be likely allies in the campaign to flip the switch to cyberethics (or digital footprint, digital citizenship, etc.).

British Columbia (and Yukon)

1. Embedded in the Curriculum

BC is undergoing some curricular change, so the elements we discovered are drawn both from very recent curricular reform documents and also longer standing curriculum.

Yukon schools follow the British Columbia program of studies. The Yukon Department of Education develops some of the resources and curriculum to make them more Yukon specific.

The Yukon Department of Education site has a direct link to the BC Ministry of Educations curriculum. No other resources were found that included privacy and were the result of efforts from Yukon.

(Grades K-12)

https://www.bced.gov.bc.ca/dist_learning/docs/digital-literacy-framework.pdf

This document is BC's Digital Framework and makes specific reference to Internet security and privacy under the following headings:

Privacy and Security:

Privacy & Security are presented as cornerstones of digital literacy in this document: "A digitally literate person knows how to protect his/her **privacy**, respects the **privacy** of others, and employs strategies to maintain information and data security online"

The following is a detailed checklist that is designed for the teacher, from the perspective of the student and falls under the Privacy & Security section:

- is aware that many websites ask for information that is **private** and knows how to responsibly handle such requests. (Gr. K-2)
- understands the reasons why people use passwords, the benefits of using passwords, and knows strategies for creating and keeping strong, **secure passwords**. (Gr. K-2)
- understands that the purpose of product websites is to encourage buying the product and is aware of methods used to promote products on these sites. (Gr. K-2)
- understands not to reveal **private information** to a person they know only online. (Gr. 3-5)
- knows how to create secure passwords in order to protect their **private information** and accounts online. (Gr. 3-5)
- knows what spam is, the forms it takes, and can identify strategies for dealing with it. (Gr. 3-5)
- understands that children's websites must protect their **private information** and how to identify these secure sites by looking for their privacy policies and privacy seals of approval. (Gr. 3-5)
- knows strategies for guarding against **identity theft** and scams that try to access his/her private information online. (Gr. 6-9)
- understands the concept of **privacy** in their everyday lives, and as it relates to using the Internet. (Gr. 10-12)
- understands the ways **websites and companies collect data online** and utilize it to personalize content for their users, as well as consider companies' motives in doing so. (Gr. 10-12)
- understands the **security implications** of computer networks and client/servers. (Gr. 10-12)

Privacy integrated in the curriculum:

The following is an overview of BC's current curriculum and its relation to privacy in education. Privacy is mentioned from grades 6-8. Portions pertaining to privacy are primarily found in sub sections and not addressed as Big Ideas or curricular concepts. The content sections pertaining to Privacy are as follows:

Grade 6 – Applied Design, Skills and Technologies Document

https://curriculum.gov.bc.ca/curriculum/adst/6

Big Ideas:

- Design can be responsive to identified needs
- Complex tasks require the acquisition of additional skills

- Complex tasks may require multiple tools and technologies

Privacy in education is located in a more specific area aligned with curricular competencies under the Content section titled:

Digital Literacy

- Internet Safety: Including **privacy** and security (secured connections, passwords, personal information), digital footprint and dossier, cyberbullying, online scams, and cybercrimes
- elements of digital citizenship: digital self image, creative credit and copyright, relationships and copyright, cyberbullying, legal and ethical issues.
- ethical and legal implications of current and future technologies

Media Arts

- issues in ethical media practices, including cultural appropriation, moral copyright, reproduction, and **privacy**

Grade 7 – Applied Design, Skills, and Technologies Document
https://curriculum.gov.bc.ca/curriculum/adst/7

Big Ideas:

- Design can be responsive to identified needs
- Complex tasks require the acquisition of additional skills
- Complex tasks may require multiple tools and technologies

Media Arts

- issues in ethical media practices, including cultural appropriation, moral copyright, reproduction, and **privacy**

Digital Literacy:

- elements of digital citizenship: digital self image, creative credit and copyright, relationships and copyright, cyberbullying, legal and ethical issues.
- ethical and legal implications of current and future technologies
- strategies for curating personal digital content, including management, personalization, organization, and maintenance of digital content; e-mail management; and workflow

Grade 8: Applied Design, Skills, and Technologies Document

https://curriculum.gov.bc.ca/curriculum/adst/8

Big Ideas:

- Design can be responsive to identified needs
- Complex tasks require the acquisition of additional skills
- Complex tasks may require multiple tools and technologies

Media Arts

- issues in ethical media practices, including cultural appropriation, moral copyright, reproduction, and **privacy**

Digital Literacy

- elements of digital citizenship: digital self image, creative credit and copyright, relationships and copyright, cyberbullying, legal and ethical issues.
- ethical and legal implications of current and future technologies
- strategies for curating personal digital content, including management, personalization, organization, and maintenance of digital content; e-mail management; and workflow

Grade 9 – no specific mention of privacy in education

The following is British Columbia's Curriculum Document titled, *Information Technology 8-10* (1996)

Grade 10 – Information Technology

http://www.bced.gov.bc.ca/irp/pdfs/applied_skills/1996infotech810.pdf

Teacher suggestions for **privacy strategies** are not found in the prescribed learning outcomes (Big Ideas) but can be found under the Suggested Instruction Strategies section. Similar to Ontario's curriculum sections in Italics under specific expectations (e.g. or i.e.)

- In English, after studying **a novel about privacy of information**, have students use information technology tools (e.g., the Internet, e-mail) to investigate the impact of information technology on **personal or corporate privacy**. Have them use information technology tools to present reports
- While working on a research project (e.g., investigating the impact of technology on **privacy**, Canadian unity, environmental toxicology), have each student use information technology tools to gather and organize data and produce a document.

(Grades 11-12)

Information and Communications Technology Curriculum

http://www.bced.gov.bc.ca/irp/pdfs/applied_skills/2003infotech1112.pdf

In this curriculum document, **privacy** is mentioned in grades 11 and 12. At the beginning of the curriculum there are Prescribed Learning Outcomes for both grades. The Outcomes that cover privacy are: demonstrate a moral, ethical, legal, and courteous approach to the use of technology and assess the impact of technology on their personal privacy. The curriculum is divided into 4 pathways: Applied Digital Communications, Digital Media Development, Computer Information Systems, and Computer Programming. Privacy is outlined in the following:

In grade 11, specifically in **Applied Digital Communications**, teachers are prompted to "Observe students as they use the Internet. Look for evidence of courteous use, effective searching, respect for personal privacy, adherence to safety guidelines, and ethical use" and discuss with them what this means (on page 23). Later in grade 12, also in Applied Digital Communications, students are expected to learn more about privacy. The learning outcomes for grade 12 are:

- "Apply ethical standards with respect to **privacy**, confidentiality, piracy, plagiarism, and personal behaviour while using electronic tools to gather information"

- "Demonstrate strategies that protect personal **privacy** while using the Internet"

- "Explain relationships between concerns about **privacy** and new technologies, including "spyware" and content filtering".

Later in grade 11, specifically in **Digital Media Development**, teachers are prompted to have students "evaluate and analyze the content of web sites for bias, **privacy**, and ethical and legal considerations". Then in grade 12, also from Digital Media Development, the learning outcome that covers **privacy** is to "assess issues of personal security and privacy in a digital society".

(Grades 10-12)

Curriculum 10-12 First Drafts: Proposals for Grades 10-12 curriculum represent a first step toward articulating the standards for the graduation learning years.

Link: https://curriculum.gov.bc.ca/curriculum/10-12

Grade 11/12:

https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/ss_10-12.pdf

- Has focus on possible privacy under the **20th Century World history** section, which states:

Big Ideas:

3. Technological and economic changes have both negative and positive effects on society.

4. A range of social and political movements have arisen from the desire for individual and collective rights.

- Also Privacy under **Law Studies**

Big Ideas:

1. Understanding legal rights and responsibilities allow citizens to reflect critically on the role of law in society.

2. Professional Development

(Grades K-12)

http://privacycompass.ca/

As the number and type of Web 2.0 tools continues to multiply, many K-12 teachers are challenged with selecting the 'right' Web 2.0 tool that allows them to support student learning while respecting privacy.

"In British Columbia, teachers using these tools can be legally responsible for reasonably managing these risks and vulnerabilities. Under British Columbian law, the responsibilities of

public school teachers are governed by the Freedom of Information and Protection of Privacy Act (FIPPA, 1996) while teachers in independent schools are governed by the Personal Information Protection Act (PIPA, 2003). The Privacy Compass was designed to help teachers navigate these tools by identifying risks and providing strategies to reasonably manage them within the scope of existing privacy legislation.

The **Privacy Compass** is designed to provide teachers with 4 key resources related to a specific Web 2.0 or learning management system (LMS) tool:

- parent/guardian background information documents: downloadable, editable information sheets and templates that can be used with parents and guardians
- teacher briefing documents: outlining the privacy concerns and considerations that teachers need to be aware of before proceeding to use with their students
- tool specific consent/permission form
- lesson ideas, when possible, to help teachers with Web 2.0 that may be new to them

Teachers can access these documents, edit them to make them specifically work for their context, and then share them with the parents and guardians of their students. This encourages teachers to be aware of the relevant privacy concerns under different legislations, the usefulness of their tool of choice, and how to articulate these to the families with whom they would be working.

The Privacy Compass also includes a tool comparison chart showing what each tool requires for enrolling with the tool and other information such as: what grade levels and subjects they are suited for, where the servers are located, and if there are any age restrictions.

- The additional resources section includes:

- eSafety Incident Response Chart
- eSafety Incident Response Form
- Tools and Resources for Privacy Breaches
- Guidelines for Online Consent
- Network and Internet Acceptable Use Policy
- Primer for Teachers Posting Students' Work Online

(Grades K-12)

A K-12 Primer for British Columbia Teachers Posting Students' Work Online

http://etec.ctlt.ubc.ca/510wiki/images/2/2b/Primer_on_Posting_Minor_Students_Final.pdf

This document is not grade specific but is a resource for teachers in BC in terms of student reported online safety, a resource for posting student work online and an outline of possible outcomes to a breach of these laws. This resource focuses on the following:

"While "BC's privacy laws are arguably the strongest in Canada" (Cooper, et al., 2011, 2), the inescapable reality is that many teachers and schools are using Web 2.0 and social media tools right now and may be in total ignorance of the new legislative requirements—especially those restricting the storage of personal information on servers external to Canada without explicit written consent, the need for teachers to be able to document evidence that parents/guardians and students were provided knowledge of and notice for the reasons the technologies are being used, and documenting the known risks. Some teachers may think that these rules are optional. They're not. If found in breach of the current privacy protection laws in BC, an individual teacher could be fined between $2,000.00 to $5,000.00 while a school could face fines as high as $50,000.00 In such a situation, educators, administrators, schools, and districts need to deal with the British Columbian policies and practices around K-12 use of these tools much like we deal with seismic upgrading: we look at the particular building, review the groups of people who will be using it, where it was built, when it was built, what codes were in place at that time, and if/how those codes have changed.

This primer is a guide to some of the considerations that should be followed in the process of planning to post exemplars of minor students' work online from K-12 schools in British Columbia, Canada. The laws and regulations around privacy protection in British Columbia, especially with regard to use of third-party online sites and services have changed significantly in the past few years. Many schools are still trying to catch-up—to develop and implement the relevant policy and procedural changes. While the practice of posting and sharing minor students' work online has been around for a while, the rules and regulations haven't and we ALL need to do our 'upgrading' to comply. Our ability to model these rules and regulations help form the social norms for technology use with parents, guardians, minor students and our communities and help lay the foundations for key components of digital citizenship.

This resource contains 5 Considerations, which are the following:

1. **Copyright and Ownership:** Student work done by the student is the property of the student—full stop. The student maintains all rights to that intellectual property and by

extension the rights for any minor British Columbian student (under 19 years of age) would be administered and overseen by a parent or guardian.

2. **Identifiability, Content & Risks:** Personal information for minors should be considered to be any recorded information, including contact information that would uniquely identify the individual. In the case of data posted on the internet, a student's first name, combined with class or teacher information can be sufficient to uniquely identify an individual. While all this data may not be on one page on a site or service, if it is distributed across a site or sites (service or services) that information can be easily brought together to identify the specific student.
3. **Storage Location & Risks:** Work or exemplars of minor students can be posted in a variety of places. They could be placed on web sites that range across the spectrum from a password protected site run/moderated by a district to a Faculty of Education student's personal portfolio on a specific web site to a publicly accessible site like Flickr, Twitter, or Facebook. Each type of location carries its own risks—even the password protected district sites. Remember that anything posted online is merely a cut-and-paste away from being public knowledge (e.g. a proud parent can take content from a password protected site—to which s/he might have rightful access—and paste it on a public Facebook account far beyond district control.
4. **Explicit Informed Consent & Risks:** British Columbia educators wanting to post a minor student's content online (or have the minor student post his/her content online) have a legal, moral, and ethical responsibility to obtain written informed consent of the minor student's legal parent or guardian. This includes Informed Consent, Notice, and Knowledge.
5. **Safety & Protection Plan:** Since use of the internet always involves some risk for students, educators must have a plan for responding to e-safety incidents that arise. It is prudent to plan the response a school or district might make to a privacy breach or other incident of concern that might occur while K-12 students are using Web 2.0 and social media tools for educational purposes. Examples of plans given on page 9 of document."

3. Highlights of Board Level and Third Party Initiatives

(Grades K-9)

The Door that is not locked- A guide for teachers on how to speak to students about internet safety organized in grade specific categories: The 411 (basic info) for online activities, Relationships and the Internet, Child Development, Tools for Teachers.

Link: http://www.thedoorthatsnotlocked.ca/app/en/teacher/5-7/landing

The Door That's Not Locked is a resource page referenced by some BC Ministry of Education supporting curriculum documents that is a resource for parents, teachers and everyone else (these are the three doors). Behind the Teachers door there are resources for teaching students about online safety divided into sections by grades: K-2, 3-4, 5-6, and 7-9. Each grade section offers grade specific information about the 411 for online activities, relationships and the internet, child development and tools for teachers. The tools for teachers section provides the following aids: internet safety tools, internet benefits, online games and video games, kids being exposed to sexually explicit material, personal boundaries and internet safety, and safe adult and internet safety. These resources tell teachers how to begin discussions about internet privacy with students and the reasons for students inquiry in these topics, all sectioned by grade from K-9. Resources also discuss speaking to students about stranger danger. All information on this site is in point form and already summarized very well.

(Grades 6-12)

"The White Hatter"- Internet Safety for Schools Program through Personal Protection Services Inc.

"The White Hatter" is an organization that provides training on Internet safety to teachers and students. The staff, Darren, Beth and Brandon Laur, provide seminars to teachers or students in Grades 6-8 and 9-12. This organization was founded by a Darren Lauer, a retired Victoria Police Department Staff Sergeant with over 29 years of policing experience, as well as a Certified Advanced Open Source Intelligence / Social Media Investigator. This organization is referenced in some BC Ministry of Education supporting documents and has had an impact in schools across Canada and some within the United States. The seminars focus on cyber-bullying, internet safety and sexting and the privacy policies associated with each of those.
http://www.personalprotectionsystems.ca/programs/internet-safety/the-white-hatter.html

Alberta

1) Embedded in the Curriculum

(K-12)

Alberta Education: Programs of Study: Information and Communication Technology

https://archive.education.alberta.ca/teachers/program/ict/programs/

-Division 3:
https://archive.education.alberta.ca/teachers/program/ict/programs/division/div3/

-Division 4:
https://archive.education.alberta.ca/teachers/program/ict/programs/division/div4/

ICT Curriculum - Kindergarten to Grade 12

Here is the mission statement for an approach to the ICT curriculum that appears holistic, grounded in theory and motivated by and for practical considerations:

"The Alberta ICT program of studies emphasizes technology as a 'way of doing things' – the processes, tools and techniques that alter human activity. As a curriculum it specifies what students from Kindergarten to grade 12 are expected to know, be able to do, and be like with respect to technology. This ICT curriculum provides a broad perspective on the nature of technology, how to use and apply a variety of technologies, and the impact on self and society. There are outcomes outlined by Division and through General and Specific Outcomes.

As technology is best learned within the context of applications, activities, projects, and problems that replicate real-life situations, the ICT program of studies is structured as a 'curriculum within a curriculum', using the core subjects of English Language Arts, Math, Science and Social Studies as a base."

The Alberta ICT curriculum is organized by grade levels ("divisions") and three foci that organize the 20 General Outcomes for the ICT curriculum:

- Communicating, Inquiring, Decision Making and Problem Solving;
- Foundational Operations, Knowledge and Concepts; and
- Processes for Productivity

https://archive.education.alberta.ca/media/453069/pofs.pdf

We found two references to privacy in the **Foundational Operations, Knowledge and Concepts** focus, one in Division 3 (Grades 7-9) and one in Division 4 (Grades 10-12).

Division 3: F.3 - Students will demonstrate a moral and ethical approach to the use of technology.

Specific Outcomes

3.2 **explain the issues involved in balancing the right to access information with the right to personal privacy**

3.5 download and transmit only materials that comply with the established network use policies and practices

3.6 model and assume personal responsibility for ethical behaviour and attitudes and acceptable use of information technologies and sources in local and global contexts

Division 4: F.2 - Students will understand the role of technology as it applies to self, work and society.

Specific Outcomes

4.6 demonstrate an understanding of the basic principles and issues of e-commerce, including such topics as **security and privacy,** marketing, and implications for governments, businesses and consumers alike

Alongside the Specific Outcomes and General Outcomes (organized under the 3 Broader Foci), Alberta teachers are provided Illustrative Examples to guide their teaching, as well as corresponding Assessment Frameworks. One of these Illustrative Examples, created for possible use in Grade 9 Social Studies, is very directly focused on privacy:

(Gr. 9 Social Studies) Illustrative Example SS09.3

https://archive.education.alberta.ca/teachers/program/ict/ie/

"Background: The volume of information made available to us through new technologies allows for greater use and abuse of knowledge by people in our society.

Student Task: With your peers, discuss the issues of access to information and personal privacy faced by users of online services. Following your discussion, write an essay/position paper about technological change and its effect on quality of life. Focus specifically on the issues involved in balancing the right to access information with the right to personal privacy."

Scoring Guide (Assessment Framework)

4 – explores,insightfully, numerous issues involved in balancing the right to access information with the right to personal privacy

– demonstrates a thorough understanding of the issues and provides new insights into some aspect of the topic

– communicates information effectively, by providing a clear thesis with support that contains rich, vivid and powerful details

3 – explains, accurately, many issues involved in balancing the right to access information with the right to personal privacy

– demonstrates a complete and accurate understanding of the issues specific to the topic

– communicates information, by providing a clear thesis with sufficient support and detail

2 – explains very few issues involved in balancing the right to access information with the right to personal privacy

– demonstrates an incomplete understanding of the issues specific to the topic and has some misconceptions

– communicates information, by providing a main idea with limited support and detail

1 – makes little or no attempt to explain issues involved in balancing the right to access information with the right to personal privacy

– demonstrates little or no understanding of the issues specific to the topic

- communicates information, by providing a limited main idea with little or no support and detail

2. Professional Development

(K-12)

Alberta Education: Tips for Safe Internet Use

https://archive.education.alberta.ca/teachers/resources/internettips/

Learning and Technology Policy Framework (2013- 2015)- Administrator Resources- Alberta Education

https://archive.education.alberta.ca/admin/technology/

1. Bring Your Own Device: A Guide for Schools

https://archive.education.alberta.ca/media/6749210/byod%20guide%20revised%202012-09-05.pdf

2. Digital Citizenship Policy Development Guide

https://archive.education.alberta.ca/media/6735100/digital%20citizenship%20policy%20development%20guide.pdf

3. Baseline Technology Assessment Provincial Final Report (2015)

https://archive.education.alberta.ca/media/15225884/ae-baseline-technology-assessment-final-report.pdf

As a set of guiding principles, Alberta teachers are provide a Media Smarts (2003) Tip Sheet to guide responsible Internet use. Among the ten tips, are two which are relevant, the first focused directly on privacy, the second on online safety:

Tips for Safe Internet Use: Reducing the Risks in the Classroom

- **Teach students never to give out personal information online.**
  The most important online safety rule for kids is protecting their personal privacy. Your students should never give out their name, email address, street address, phone number or picture without a parent's or teacher's permission. Caution students about giving away too much information when filling out online registration forms.

- **Report any online content or activity that you suspect is illegal.**
  You or your students may encounter online situations that should be reported to your Internet Service Provider and/or the local police. These include online hate; harassment, cyberstalking or attempts to lure a child; dangerous activities such as bomb-making, terrorism or obtaining illegal weapons; child pornography; and physical threats.

Alberta is supportive of Bring Your Own Device initiatives in schools and has developed guidelines for school administrators to govern the use of privately owned devices in public schools.

1. Bring Your Own Device: A Guide for Schools

https://archive.education.alberta.ca/media/6749210/byod%20guide%20revised%202012-09-05.pdf

"This Bring Your Own Device (BYOD) guide is intended to provide information related to launching a BYOD model. It identifies issues related to personally owned devices in schools, discusses various perspectives on such issues and leaves the reader with definitions, a knowledge base and a series of questions school authorities should ask and answer prior to making a decision."

This BYOD policy document includes 9 sections and the following 2 discuss privacy. Section 4 includes desired pedagogical outcomes and Section 6 speaks to the thorny issues of storing content off site through cloud computing:

Section 4: Establishing a Culture of Digital Citizenship

Digital Citizenship in Action- "Today's digital devices and social media provide opportunities for students to be part of the participatory digital culture that connects people both locally and globally. To participate fully, ethically and safely, students must step up and exercise their rights and responsibilities as digital citizens. That means that the school culture must embrace digital citizenship, which Alberta school authorities have identified as critical to the success of the use of technology in schools. The introduction of the BYOD model extends that culture beyond the school, as students use their devices for learning outside of school."

Digital Rights, Responsibilities and Security - freedoms extended to all digital technology users and the expectations that come with them

Digital Law - legal rights and restrictions governing technology use

Digital Security - precautions to guarantee online personal safety and the security of their network

As part of the BYOD teaching and learning experience, students will learn to…

- protect their online identity and their individual right to privacy when using e-mail, chat, gaming or instant messaging, recognizing the right of the school to monitor all student activity associated with the school.

- understand that the strength of privacy measures is commensurate with the sensitivity of the information.

<u>Section 6: Digital Content - Digital content for a BYOD model:</u>

The major issues about digital content and personal devices relate to accessibility, license, privacy of students and faculty, Internet access, standards/media literacy, context, curation and copyright.

"Privacy of students and faculty is an issue of paramount importance as schools begin using cloud computing. This will provide access to digital content for student and faculty and greater productivity, communication, document sharing and storage. Cloud computing is the expansion of local networks into a system of networks that include high capacity computing resources, storage in data farms, a range of computer applications and opportunities for collaboration and

connections across this system of networks (e.g., Google Docs). Ultimately, it is the responsibility of schools to protect the privacy of students in the use of school-sanctioned Internet sites. The question facing schools is whether or not companies that maintain sites that students log into for schoolwork are maintaining the privacy and security of those works. Schools also need to ensure the security of data such as student data and student work and understand that the strength of privacy measures is commensurate with the sensitivity of the information."

2. Digital Citizenship Policy Development Guide

https://archive.education.alberta.ca/media/6735100/digital%20citizenship%20policy%20development%20guide.pdf

The Digital Citizenship Policy Development Guide provides educators with guidance over the multiple considerations involved in implementing digital teaching and learning strategies. It draws from research and the practical experience of Alberta schools. This guide is based on 9 areas drawn from research by Mike Ribble (2011), and two newer considerations. There is reference to privacy concerns in several of these areas, but, in particular, Area 3 (below).

The description of each "Area" is followed by a series of key questions administrators should ask themselves to determine whether the qualities and shortcomings of local practices. These questions are adapted from the same type of questions posed in Ribble, (2011). We have included only one set of sample questions in this report, that pertaining to Area 3 (below).

2. Digital Commerce: Online buying and selling of goods.

…"there are security considerations that students frequently misunderstand or overlook. For example, boyd [sic] (2010) reports students sharing passwords with friends as a statement of kinship. Livingstone & Haddon's (2011) research shows that 7% of 11 to 16 year olds have had others use their password and 1% of this age group has lost money to being cheated on the Internet."

3. Digital Communications: Electronic exchange of information.

SEE MORE SUBSTANTIAL EXCERPT BELOW.

4. Digital Literacy: Process of teaching and learning about technology and the use of technology.

To underscore some of the shortfalls of students' digital literacy, this document draws on the research by Livingstone & Haddon (2011) that found from a sample of children aged 9-16 that nearly 50% could not change privacy settings on a social networking profile; and over 50% were unable to block spam.

6. Digital Law: Responsibility for actions and deeds using electronics.

In this area, the questions of identity theft and the protection of confidential information are addressed. In the questions that are provided for administrators to consider, this is included:

"Has your school authority articulated privacy rights, responsibilities and expectations for employees and students?"

7. Digital Security: Electronic precautions to protect learners, staff and organizations.

Clearly, the secure management of data and communications has implications for privacy, but these concerns are outside of the teaching and learning equation.

"Access to students on the whole is a security consideration somewhat unique to school systems. While some organizations may disregard communications into the organization as an employee or client matter, this is not the case in education. In loco parentis (educator's obligation to act as a natural parent) indicates that school authorities have, and always have had, a security responsibility."

"Finally, school authorities must protect the people within the school authority, as well as the school authority itself.

This includes protecting employees' private information, protecting their identity and protecting the storage and transport of their information."

Two additional areas include:

10. Cloud computing: Transparently accessing networked servers across the Internet.

Educators need to grapple with questions of data security and privacy when using Web 2.0 social media and online collaboration platforms. In regards to commercial online collaboration tools such as Google Docs or One Drive, the concerns center around ownership and offshore storage of the data. In other words, these issues go far beyond school district or even provincial control of data, but rather ceding control to the private sector and to out-of-country storage.

As for social media, here the same problems of ceding control of data exist, but there is the further problem of multiple points of data seepage given that a student's best efforts at controlling their own data can be undermined by a peer. Social media thus present a unique challenge to educators and policy makers concerned about safeguarding student privacy.

11. Personally owned devices: Student-owned or staff-owned technologies including smartphones, laptops and notebooks.

THESE CONCERNS ARE ADDRESSED IN THE SECTION ON THE BYOD PROGRAM (ABOVE).

Area 3. Digital Communications: Electronic exchange of information. Here research is presented that provides a complex and contextual view of how privacy is impacted by the new media. Arguably, if adopted in the classroom, this approach enables what we would call an **'empowerment'** approach to safeguarding privacy because it provides a conceptual frame for understanding privacy and presents a complex perspective on privacy in the lives of youth:

Privacy: "In keeping with considerations of building an online identity are also considerations of privacy. In his book, *The Future of Reputation: Gossip, Rumor, and Privacy on the Internet*, Solove (2007) presents a compelling argument that the nature of privacy is changing and that any act in public risks becoming a part of the Internet's digital archive, a permanent ongoing record of the act – whether positive or negative. boyd [sic] (2008), in her extensive ethnographic research on practices of teenagers using social media, references three dynamics affecting youths' experiences in public networks and affecting the nature of privacy: a blurring of public and private practices, producing information for invisible audiences and collapsed contexts wherein the lack of spatial, social and temporal boundaries makes it difficult to maintain distinct social contexts. boyd's (2010) work suggest a dramatic change in youths' interest in sharing across a public setting. Once material is published, the nature of the Internet has bearing on the privacy of information through four properties:

• **Persistence** (what is posted remains indefinitely);

• **Searchability** (easy to find using common search terms);

• **Replicability** (one can copy and paste the information into new contexts); and

• **Invisible audiences** (there is minimal control over public and private messaging/sharing).

Each of these contributes to a change in the nature of privacy. As well, each also underlines the importance of digital citizenship and discussions regarding varying perspectives and mores in a digital world. Classrooms are potentially less private than ever previous. Progressive educators openly share insights and activities in their classrooms (Fisher, 2011; Branigan-Pipe, 2011; Wright, 2011). Perceptions of instruction and schools can be rated and openly shared through today's Web 2.0 tools. While policy is not a vehicle to control student discussion, policy development can be used to create open meaningful dialog within school authorities and schools on communication issues."

Questions adapted from Ribble 2011:

Policy Considerations

• In your school authority, what guidance are students receiving in appropriate communications? Are there clear expectations for public communications through Web 2.0 and social media? Are the parameters clear?

• In your school authority, what educational guidance are students receiving in developing their digital identities?

• In your school authority, are students and educators participating in educational conversations about the nature of privacy and public sharing? Are students guided in what they can share publicly and what must remain private (e.g. limits of personal information, photos, video)?

• Has your school authority given consideration to the management of inappropriate public expression by students? By staff? By parents? By community?

• Has your school authority provided guidelines to support students and educators in appropriate communications?

<u>Third Party Instructional Resources in the Guide:</u>

Passport to the Internet for Grades 4 to 8 – Alberta Education has licensed this

interactive MediaSmarts resource for Alberta Grades 4 to 8 students. The online resource provides instruction on Internet skills including online safety, privacy management and ethics. **Link** to the website: http://mnet.hypernet.ca/e/

(Alberta students and teachers can access the resource through www.LearnAlberta.ca.)

- username and password required to access.

MyWorld for Secondary Students – Alberta Education has licensed this interactive MediaSmarts resource for Alberta Grades 9 to 12 students. This online resource is designed to guide secondary students in Internet skills by simulating online experiences youth may encounter. The resource guides students in researching and authenticating online information, managing privacy and reputation, dealing with online relationships and using digital media in an ethical manner. **Link** to the website: http://mnet.hypernet.ca/e/ (Alberta students and teachers can access the resource through www.LearnAlberta.ca.)

- username and password required to access.

My Privacy, My Choice, My Life – Guidance from the Office of the Privacy Commissioner of Canada for students, teachers and parents in managing privacy. Link to the website: http://www.youthprivacy.ca/en/index.html

-Office of the Privacy Commissioner of Canada: This website contains free presentations, tips, fact sheets, videos and other resources to help youth understand the relevance and importance of privacy when using digital technologies. Resources are targeted to parents and educators. This site has a Presentation Packages for Parents and Teachers and these presentation packages are for **grades 4-6, 7-8, and 9-12.** Each package provides a PowerPoint presentation to show students about privacy policies and speaking notes. The **link** for this site is: https://www.priv.gc.ca/youth-jeunes/pp/index_e.asp

That's Not Cool - Conversations and resources to guide students in ethical behavior and managing privacy in a digital world. This attractive and informative Web site is pitched to teens and adult allies alike. This U.S. site is supported by the U.S. Department of Justice Office on Violence Against Women. Also offered are resources for teachers and parents of middle school and high school students**. Link** to the website: http://www.thatsnotcool.com/

3. Baseline Technology Assessment Provincial Final Report (2015)

https://archive.education.alberta.ca/media/15225884/ae-baseline-technology-assessment-final-report.pdf

Baseline Technology Assessment Background

Alberta's Learning and Technology Policy Framework (LTPF) was developed to provide leadership and strategic direction for government and school authorities in the use of technology to support learning. To help guide the implementation of this policy framework, Alberta Education contracted IBM Canada Ltd. to conduct a Baseline Technology Assessment for all public, separate, Francophone and charter school authorities in the province. Among other findings, the survey demonstrates that, among educators, there is a strong confidence (82%) that the local school authority has clear policies in place to safeguard digital security/privacy.

Online Survey Results of Alberta Teachers:

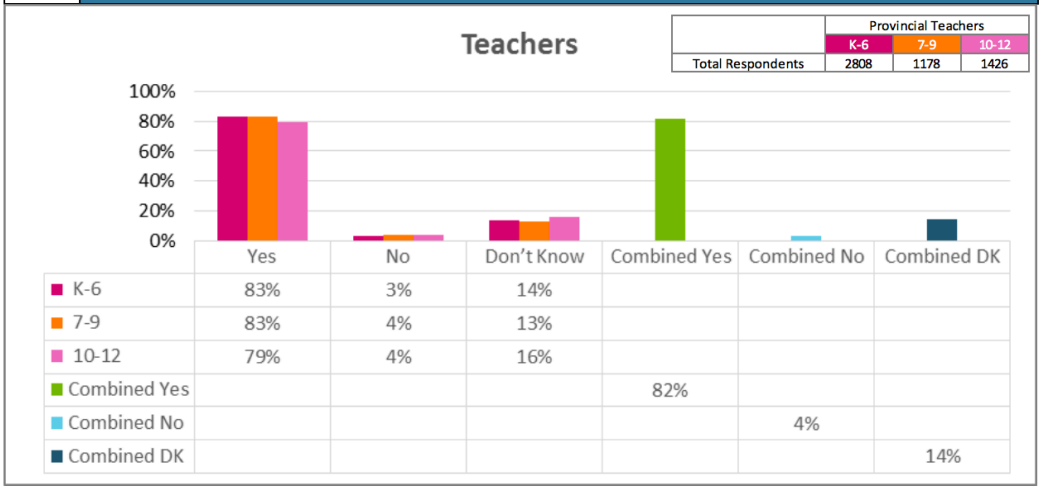
SA+A: Strongly Agree/ Agree

D+SD: Disagree/ Strongly Disagree

DK: Don't Know

J. School Authority Policies for Security and Privacy

52 My school authority has clear policies in place for security/privacy protection



	Yes	No	Don't Know	Combined Yes	Combined No	Combined DK
K-6	83%	3%	14%			
7-9	83%	4%	13%			
10-12	79%	4%	16%			
Combined Yes				82%		
Combined No					4%	
Combined DK						14%

3. Highlights of Board Level and Third Party Initiatives

Our various searches for privacy resources in Alberta eventually yielded other Third Party resources. Here we list 3:

(K-12)

1. Be Web Aware: http://www.bewebaware.ca/english/privacy.html
2. Cybertip.ca: https://www.cybertip.ca/app/en/internet_safety-for_children
3. Social Smarts: Privacy, the Internet and You: https://www.priv.gc.ca/youth-jeunes/fs-fi/res/gn_index_e.asp

Following are resources that provide useful information pertaining to safe and responsible online practices:

1. Be Web Aware: http://www.bewebaware.ca/english/privacy.html

This Web resource was produced by Media Smarts in cooperation with Bell Canada and Microsoft Canada.

"Young people have enthusiastically embraced this social medium, which lets them express themselves and create networks of friends. Their online activities include instant messaging, social networking, blogs, uploading and downloading videos, and participating in online games where players from around the world determine storylines.

But Web 2.0's immense possibilities have a trade-off – privacy invasions – which can happen in two distinct ways:

- **Marketing of our personal information.** Commercial Web sites exist to collect personal information on users and target them with marketing messaging. For example, on its page for advertisers, *Facebook* lists the benefits of its unique environment for carefully targeting consumers and integrating content, recommendations from friends, and viral distribution of ads.
- **Putting information online that is accessible to all.** When kids fill out a detailed profile on MSN or a social networking site, they may be allowing all users of the network to have access to their information and photos if they aren't careful. Once posted online, information is out of our control and often difficult to remove.

Privacy concerns on social networking sites

Kids begin visiting commercial sites at early ages. While participating in activities in these online playgrounds, young players are often rewarded with points, prizes and perks when they give away personal information. It seems fairly harmless, but there are commercial and safety implications that need to be considered – especially when young people begin interacting on sites where personal information is accessible not only to advertisers, but to other Internet users as well.

Social networking sites and virtual worlds often ask users to fill out a detailed profile that may include their name, address and various personal details. For example, *Facebook* includes options for "Political Views", "Religious Views" and "Relationship Status" as part of its user profiles.

It is futile and counterproductive to attempt to force young people not to reveal anything about themselves in their profiles. A better approach is to emphasize that they are in charge of how much personal information they want to share about themselves online – and with whom – by drawing their attention to the different ways they can create and protect their profiles.

For preteens, status on instant messaging and social networking sites is based on the number of "friends" they are connected to, so it's common for them to accept friend requests from anyone who asks. A basic ground rule for kids this age is to only accept friend requests from people they know in real life and to make sure their settings restrict access to their profiles to close friends.

2. Cybertip.ca: https://www.cybertip.ca/app/en/internet_safety-for_children

Cybertip.ca includes an internet safety section. The website uses the "The Door That's Not Locked" site as a resource for online privacy safety.

http://www.thedoorthatsnotlocked.ca/app/en/teacher/5-7/landing

The Door That's Not Locked is a resource for parents, teachers and everyone else (these are the three doors). Behind the Teachers door there are resources for teaching students about online safety divided into sections by grades: K-2, 3-4, 5-6, and 7-9. Each grade section offers grade specific information about the 411 for online activities, relationships and the internet, child development and tools for teachers. The tools for teachers section provides the following aids: internet safety tools, internet benefits, online games and video games, kids being exposed to sexually explicit material, personal boundaries and internet safety, and safe adult and internet

safety. These resources tell teachers how to begin discussions about internet privacy with students and the reasons for students inquiry in these topics, all sectioned by grade from K-9. Resources also discuss speaking to students about stranger danger. All information on this site is in point form and already summarized very well.

Cybertip also references a resource called "Zoe and Molly Online". **The Zoe and Molly Online Safety** Initiative, based on a true case submitted to Cybertip.ca, is designed to help parents and educators teach children **8 to 10 years of age** about online safety. This resource includes two comic books, a lesson, a website and interactive activities that focus on the risks associated with playing games online and sharing personal information and pictures online. http://www.zoeandmolly.ca/app/en/. The website has a resource for parents and teachers and it gives advice on how to use the comic books at home or at school, allows for online comic book access, and teacher evaluations, resources and activities.

3. Social Smarts: Privacy, the Internet and You – A graphic novel produced by the Office of the Privacy Commissioner to teach students about online Privacy and Internet Safety. THIS IS AN EXCELLENT RESOURCE! https://www.priv.gc.ca/youth-jeunes/fs-fi/res/gn_index_e.asp

Saskatchewan

1)Embedded in the Curriculum

Privacy is embedded in the curriculum of several upper-level high school courses, including Communication Media, Computer Science and Law.

(11)

Saskatchewan Curriculum- Communication Media 10, 20, 30

https://www.edonline.sk.ca/bbcswebdav/library/curricula/English/Practical_And_Applied_Arts/Communication_Media_10_20_30_2010.pdf

Communication Media 20 (Grade 11)

Module 2A: Legal and Ethical Issues (Core)

Suggested Time: 2-3 hours

Level: Introductory

Prerequisite: None

Outcome: Investigate and articulate legal issues related to media such as copyright, **privacy**, and consent.

Indicators:

b. Describe the three factors that place some works in the public domain and cite some examples of these works along with reasons for their inclusion.

d. Investigate and report on the need for consent in various circumstances such as location, appearance, material, and music.

(12)

Saskatchewan Curriculum- Computer Science 20, 30

https://www.edonline.sk.ca/bbcswebdav/library/curricula/English/Science/Computer_Science_20_30_1999.pdf

Computer Science 30 (Grade 12)

Outline of Foundational and Learning Objectives

Unit 6: Impact of Information Technology Foundational Objective

To provide students with an opportunity to explore the nature of computer science and the societal impact of information technology.

Suggested Time: 3-5 hours. Learning Objectives:

6.4 Social Effects of Computers and Networks

Appraise the effects of computer technology on society.

Exploration of this topic may provide opportunities for guests to visit the class and exchange information and opinions with students.

Students need to be familiar with the effects on:

· employment and careers

· **privacy**

· interpersonal relationships and communication

· depersonalization

· crime

· dependency on computers.

Small group discussions followed by oral reports and a class discussion is a strategy to use.

(12)

Saskatchewan Curriculum- Law 30- the Law and You

https://www.edonline.sk.ca/bbcswebdav/library/curricula/English/Social_Studies/Law_30_2002.pdf

Law 30: The Law and You

A Curriculum Guide for the Secondary Level (Grade 12)

Issues in the Law- Discussion questions from "Student Handout 3.5 - Robertson v. Butler Case Study" lesson

3. Under what conditions should an individual be able to instigate tort action for **invasion of privacy** related to use of electronic communications devices such as cellular telephones and computers?

"Student Handout 3.7 - Wilkins v. Allaby Case Study" Lesson

Privacy

Continuing advances in electronic communications technology will result in new issues in civil law regarding privacy of communication, as well as many other consumer and contract law related issues. Canadians will require new public policy and new law to address issues as they arise.

2) Professional Development

(3-12)

Digital Citizenship Education in Saskatchewan Schools

http://publications.gov.sk.ca/documents/11/83322-DC%20Guide%20-%20ENGLISH%202.pdf

Digital Citizenship Education in Saskatchewan Schools: *A Policy Planning Guide for School Divisions and Schools to Implement Digital Citizenship Education from Kindergarten to Grade 12*

This document is under the resource section of the Saskatchewan Curriculum Education site. Written by Alec Couros and Katia Hildebrandt, this framing document outlines strategies and pitfalls for incorporating digital citizenship education into the curriculum from grades K-12. The guide acknowledges a debt to the Alberta Digital Citizenship Policy Development Guide and similarly uses Mike Ribble's (2011) nine point framework for digital citizenship with the addition of two further concerns: cloud computing and personal devices in schools.

Like the cognate Alberta document, this guide should provide the principles that will govern the use of digital technology in schools and also provide many practical tips to support teaching and to mitigate against potential problems. The approach is one of infusion or dispersion: "Digital citizenship education is not intended to be a stand-alone unit, course or lesson, rather it is best learned and understood when taught in context through supported online practice and real-life examples and experiences." In practice, a policy document such as this one provides a set of suggestions that may or may not be taken up in specific settings.

Many of the findings and suggestions reflect those of the Alberta Digital Citizenship Policy Development Guide, but there are a couple of sections that distinguish this guide that are relevant to the teaching and learning of privacy in schools.

One is a simple set of slogans made to circulate as a meme to students that outline what is a Digital Citizen. Included among the slogans is "I am a digital citizen because…(7 possible slogans, including)...I **protect** myself by keeping my device secure, my settings private and not sharing passwords."

The second is a series of graphically organized tables that specify a Digital Citizenship Continuum, drawing on Ribble's three broader categories, **Educate, Protect and Respect** that, in turn, enclose the nine points of Ribble's framework for digital citizenship education. References to privacy were primarily nested under the category of **Protect,** but there was also on reference to privacy under **Educate.**

Protect:

- Grades 3-5 Students Understand and Do:

    - Do:

Students will… Discuss the idea of protecting privacy by not answering questions of giving out personal information.

- Grades 6-9 Students Understand and Do:

    -Understand:

I understand that…[I] play an important role in protecting myself and my equipment. I may put myself in danger when flirting online or sexting and I exchange digital content that I am uncomfortable sharing. Social media accounts and websites have privacy policies and settings I need to be aware of and use to protect myself and my identity.

    - Do:

Students will… Ensure that they use complex passwords online and on mobile devices to protect personal information and equipment. Discuss the legal and ethical implications of sexting. Learn

when and how to get to keep help if they encounter an unsafe situation online. Read and discuss privacy policies on popular social media websites and learn how to set their privacy settings

-Grades 10-12 Students Understand and Do:

-Understand:

I understand that… I need to read and use privacy terms on websites and social media accounts. There can be legal consequences, social implications and potential abuse when engaging in sexting and exchanging pornography.

- Do:

Students will… Ensure that they use complex passwords online and on mobile devices as well as ensure their privacy settings are used on social media accounts in order to protect personal information and equipment. Compare and contrast case studies that discuss the legal and ethical implications of sexting. Learn when and how to get help if they encounter an unsafe situation online.

Educate:

- Grade 10-12 Students Understand and Do:

-Understand:

I understand that… The practice of "Big Data" have an impact on web experience and privacy.

3)Highlights of Board Level and Third Party Initiatives

(K-9)

The Door That's Not Locked

http://www.thedoorthatsnotlocked.ca/app/en/teacher/5-7/landing

The Door That's Not Locked is a resource page for parents, teachers and everyone else (three doors). Behind the Teachers door there are resources for teaching students about online safety divided into sections by grades: K-2, 3-4, 5-6, and 7-9. Each grade section offers grade specific information about online activities, relationships and the internet, child development and tools for teachers. The tools for teachers section provides the following aids: internet safety tools, internet benefits, online games and video games, kids being exposed to sexually explicit material, personal boundaries and internet safety, and safe adult and internet safety. These resources tell teachers how to begin discussions about internet privacy with students and the reasons for students inquiry in these topics, all sectioned by grade from K-9. Resources also recommend speaking to students about stranger danger. All information on site is in point form and already summarized very well.

(K-12)

SaskTel- I am Stronger

http://iamstronger.ca/

I am Stronger is a website dedicated to anti-bullying and anti-cyberbullying that also serves as a digital citizenship resource for students, teachers and parents. It provides links to a series of resources from third party resources such as Media Smarts and the Privacy Commissariat, as well as from the Saskatchewan Ministry of Education. It has a campaign type focus that supports positive change in young people. It supports school divisions and schools to help students learn how to build and maintain a positive online presence, respect intellectual property boundaries and protect their privacy online.

We found explicit reference to privacy in the "Digital Citizenship Education in Saskatchewan Schools" Curriculum already outlined in this document (above) and in the link to the Privacy Commissariat.

Manitoba

1. Embedded in the Curriculum

(K-2)

A Continuum Model for Literacy with ICT- Across the Curriculum

http://www.edu.gov.mb.ca/k12/tech/lict/resources/handbook/lict.pdf

ICT- Information and Communications Technology

This is a resource for developing digital literacy. The only section that includes privacy in the document is one of the Big Ideas:

Big Idea: Responsibility and Ethics

The first Big Idea in the Affective Domain, Responsibility and Ethics, refers to knowing about, demonstrating beliefs about, and valuing policies, guidelines, and behaviours for using ICT ethically, responsibly, and safely, including **protection of privacy** and of intellectual property. Learners are expected to demonstrate ethical and responsible behaviour at all times when using ICT.

It can also be seen that privacy would be discussed in the second Big Idea but it is not directly mentioned:

Big Idea: Social Implications

The second Big Idea in the Affective Domain, Social Implications, refers to awareness of, beliefs about, and values concerning the uses of ICT in society, the societal consequences of **ethical and unethical use** of ICT, and the benefits and **risks** to communities and societies of developing and using ICT.

(7-9)

Outcome Chart - Manitoba - Career Development 10: Half Credithttp://mediasmarts.ca/teacher-resources/digital-media-literacy-outcomes-province-territory/manitoba/career-development/outcome-chart-manitoba-career-development-10-half-credit

This source is a Manitoba Career Development curriculum and is on Media Smarts. In the outcome chart, click on “Promoting Ethical Behaviour Online: My Virtual Life – Lesson,”

SAMPLE LESSON NOTES:

In this lesson, students learn about ways to manage their privacy and reputation online by exploring their digital presence and to make good choices about sharing other people’s content

online. Students explore how they are portrayed online through their own content and content posted or shared by others, and research tools for controlling access to their online content. Finally, students explore moral dilemmas relating to posting and sharing personal material.

(4-6)

Outcome Chart - Manitoba - Social Studies 5

http://mediasmarts.ca/curricularoutcomechart/outcome-chart-manitoba-social-studies-5

This source is a Manitoba Social Studies Curriculum, and is on Media Smarts.

SAMPLE LESSON NOTES

Lesson 4: Communication and Social Media," takes you to a possible lesson based on the curriculum. In this lesson, students will compare and contrast a variety of online social networking platforms and build an understanding of how they work to share messages. They will reflect on basic online rules and explore concepts of safety and privacy when accessing and sharing information online. It is part of the Identity, Culture, and Community part of the curriculum. This link provides many different games and resources for teachers as well.

2. PROFESSIONAL DEVELOPMENT

(K-12)

Bring Your Own Device Guide

http://www.edu.gov.mb.ca/k12/docs/support/byod/document.pdf

This guide provides guidance to school leaders who are considering implementing a Bring Your Own Device (BYOD) program in their school by posing a series of questions:

- Keeping in mind recent amendments to the Public Schools Act (Safe and Inclusive Schools), have we revised our Appropriate Use Policy (AUP) to include social media and have we made staff and students aware of expectations regarding cyberbullying?

- Are we teaching our students about their rights and their responsibilities in the digital world in regards to copyright, privacy, safety, etiquette, etc.?

- Are our students able to identify and relate personal and societal consequences of the ethical and unethical use of ICT?

- How is the ethical and responsible use of ICT being modelled by our teachers?

- Do our teachers and students know how to protect themselves, their identity, and their electronic data? (e.g., virus protection, password protection, firewalls, backups, phishing, identity theft scams, fraudulent websites/ emails, online stalking, etc.)

- Have we given thought to the storage of student data (e.g., cloud computing) and the potential data ownership and privacy implications?

(K-12)

Manitoba Education: Safe and Caring Schools

What is the history of the Safe and Caring Schools Strategy in Manitoba?

http://www.edu.gov.mb.ca/k12/safe_schools/history.html

Amendments to PSA introduced to the Legislature as Bill 24 *(Cyber-bullying and Use of Electronic Devices)* became effective June 12, 2008. These amendments:

- expanded the requirement of school boards to establish a policy respecting the appropriate use of the Internet and electronic mail to cell phones (including cell phones equipped with digital cameras), digital cameras and any other personal communication devices identified by the board.
- expanded the required statements in a code of conduct to include a requirement for student and staff to adhere to school policies respecting the aforementioned electronic devices.
- expanded the concept of "bullying" to include cyber-bullying and added a new provision respecting the interpretation of cyber-bullying as using the Internet or other information or communication technologies, such as e-mail messages or text messages sent by cell phone or pager, to support deliberate, repeated and hostile behaviour by an individual or group that is intended to harm someone else.

3. Highlights of Board Level and Third Party Initiatives

(K-12)

Safe Schools Manitoba- Educator Resource page

http://www.safeschoolsmanitoba.ca/educatorsResources.php

Safe Schools Manitoba is a resource organization for educators, students and parents that advocates for positive, proactive approaches to the promotion of safe and caring schools and communities. The Safe Schools Web site acts as a portal to other 3rd Party resources. The following 3rd Party sites, all links from this site, are resources for teachers and not grade specific unless specified otherwise.

1. **Cybertip.ca**: https://www.cybertip.ca/app/en/internet_safety-for_children

Cybertip.ca includes an internet safety section. The website uses the "The Door That's Not Locked" site as a resource for online privacy safety.

http://www.thedoorthatsnotlocked.ca/app/en/teacher/5-7/landing

The Door That's Not Locked is a resource for parents, teachers and everyone else (these are the three doors). Behind the Teachers door there are resources for teaching students about online safety divided into sections by grades: K-2, 3-4, 5-6, and 7-9. Each grade section offers grade specific information about the 411 for online activities, relationships and the internet, child development and tools for teachers. The tools for teachers section provides the following aids: internet safety tools, internet benefits, online games and video games, kids being exposed to sexually explicit material, personal boundaries and internet safety, and safe adult and internet safety. These resources tell teachers how to begin discussions about internet privacy with students and the reasons for students inquiry in these topics, all sectioned by grade from K-9. Resources also discuss speaking to students about stranger danger. All information on this site is in point form and already summarized very well.

Cybertip also references a resource called "Zoe and Molly Online". **The Zoe and Molly Online Safety** Initiative, based on a true case submitted to Cybertip.ca, is designed to help parents and educators teach children **8 to 10 years of age** about online safety. This resource includes two comic books, a lesson, a website and interactive activities that focus on the risks associated with playing games online and sharing personal information and pictures online.

http://www.zoeandmolly.ca/app/en/. The website has a resource for parents and teachers and it gives advice on how to use the comic books at home or at school, allows for online comic book access, and teacher evaluations, resources and activities.

2. **Internet 101:** Safe Schools' second resource is Internet 101, an RCMP-produced internet safety resources page http://www.gcflearnfree.org/internet101/1. There is an internet safety link that directs the viewer to the following information about internet safety for youth:

- **Interacting Online**

The ways we interact online are almost endless. Learn more about the different ways to interact online, find tips on how to ensure your online interactions are positive, and to find out what to do if you have an issue while **interacting online**.

- **Online Scams and Fraud**

The Internet has made it easier to find information we're looking for, stay in contact with friends, shop for clothes from our couch, play games with people halfway across the world and plan events without leaving home. However, the growing popularity of doing things online also means that you are at a greater risk of being taken advantage of online.

3. **Facebook Guide for Educators and Community Leaders:** This guide is produced by Facebook for use in schools and community organizations. http://fbhost.promotw.com/fbpages/img/safety_resources/ffeclg.pdf

This guide is a useful contribution from the social media giant and includes a chapter on privacy and controlling information online and includes information and guidance on common privacy controls available to social media users that educators can use and share with students as well as activity logs, privacy settings, etc.

4. **connectED**: This is a resource for grades 4, 5 and 6. For each grade, there is a description of how to teach different topics related to online safety and privacy. Each grade has a 5-step cartoon that raises issues for students about safety risks and responsible ways of overcoming them. The site also includes teacher resources, most of which are not specific to privacy. http://reallifeonline.ca/Grade-4/Part-1--Netiquette.aspx

5. **NetSmartz**: Created by the US-based National Center for Missing and Exploited Children, Netsmartz is an interactive, educational program that provides age appropriate resources for instructing children how to be safer on and offline. The site contains free videos, presentations, lessons, games, etc. to teach parents and guardians, educators, law enforcement officials and children. The NetSmartz Student Project Kit helps students in **grades 6-12** teach their peers and younger students about topics like cyberbullying, online privacy, and digital ethics.
   The kit's projects are divided by grade and topic to help students pick the best activity for their audience. The student kit can be downloaded from this link: http://www.netsmartz.org/StudentKit. The kit includes a focus on privacy:

   Online Privacy
   Many people share information about themselves online through comments, images, and text messages. But once you put information online, it's easy to lose control of it. Anyone with access to your social media accounts may copy, share, and alter the information. That's why it's important to take precautions to keep your information safe online. Create strong passwords (and don't share them!), consider friend requests carefully, and only accept people you know you can trust. Those who reveal too much personal information online have become targets for identity theft, scams, computer hacks, and other trouble. Before sharing personal information it is important to check websites for signs that they are trustworthy. For example, before entering financial information like a credit card number on a website, check the URL for "https" or the lock symbol.

   Think before sharing:
   •Addresses
   •Financial information
   •Passwords
   •Phone numbers
   •Schedules
   •Social security numbers

   Discussion Prompts
   •What do you do to keep your online information private and secure?
   •How do you decide who to add to your friends' list?
   •When do you think it's OK to share personal information online?
   •How frequently do you change your passwords?
   •Have you ever had anyone steal a password? What happened next?

6. **Common Sense Media:** This US-based organization features a detailed K-12 privacy curriculum that is grade specific**.** https://www.commonsensemedia.org/educators/digital-citizenship.

   https://www.commonsensemedia.org/educators/scope-and-sequence

   The following is a summary of only the portions of units that include privacy.

Digital Citizenship Document: K-2:

Unit 1

- Students follow safety rules when they travel online, just as when traveling in the real world
- Students review what information is private and should not be shared without a trusted adult's permission
- View an online form that asks for private information and understand that they should never share this kind of information online
- Students then view sites that ask them to create usernames, and they learn rules for safeguarding their private information when they create usernames

Unit 2:

- First, students learn about the similarities of staying safe in the real world and when visiting websites.
- Next, they learn about the website traffic light and complete an activity where they match statements about websites to the correct safety level of the site.
- Students learn that the information they put online leaves a digital footprint or "trail." This trail can be big or small, helpful or hurtful, depending on how they manage it.
- Students follow the digital information trails of two fictional animals. They make observations about the size and content of each trail, and connect these observations by thinking critically about what kinds of information they want to leave behind.

Unit 3:

- Students explore why people use passwords, learn the benefits of using passwords, and discover strategies for creating and keeping strong, secure passwords.

Digital Citizenship Document Gr. 3-5:

Unit 1:

- They learn the difference between private information and personal information, distinguishing what is safe and unsafe to share online.
- Students discuss all the ways they use technology for communication, put themselves in the shoes of children who are cyberbullied on a kids' game website, and explore both the similarities and differences between in-person versus online communication.

Unit 2:

- Students learn how to create secure passwords in order to protect their private information and accounts online. Students learn tips for creating safe passwords.
- They explore scenarios in which two characters choose passwords, and they use the tips they have learned to create secure new ones for those characters.

Unit 3:

- Students learn that, while people can develop rewarding friendships online, they should be cautious with online-only friends and never reveal private information without asking a parent or trusted adult for permission.

Digital Citizenship Document Gr. 6-8:

Unit 3:

- Students learn that they have a digital footprint, which can be searched, shared, and seen by a large, invisible audience.
- Students then learn that they can take some control over their digital footprint based on what they post online.
- Students watch the video "The Digital Footprint" to learn how information online can easily get out of one's control.
- They then examine the blog posts, photos, and profiles of two fictional host applicants for a TV show called "Trillion Dollar Footprint" and decide which would make a more honest host who works well with others.

Digital Citizenship Document Gr. 9-12:

Unit 2:

- Students first talk about common impressions of "stranger danger." Students learn why the term "online predator" is misleading, and how to identify more realistic forms of inappropriate contact.

Unit 3:

- Students explore the concept of privacy in their everyday lives, and as it relates to using the Internet.
- Students examine a scenario in which a research company collects information about them. They reflect on concerns they might have, and they learn about the kinds of information websites collect.
- They learn that sites are required to post their privacy policies and that kids should check those policies on the sites they visit.

Unit 4:

- Students consider the ways websites and companies collect data online and utilize it to personalize content for their users, as well as consider companies' motives in doing so.

* All of these sections are accessible from the one link provided above*

7. **Office of the Privacy Commissioner of Canada: A**lso included on the Safe Schools site, is the link to the Privacy Office. Here is the description of your site written by a research assistant: This website contains free presentations, tips, fact sheets, videos and other resources to help youth understand the relevance and importance of privacy when using digital technologies. Resources are targeted to parents and educators. This site includes Presentation Packages for Parents and Teachers for grades 4-6, 7-8, and 9-12. Each package provides a PowerPoint presentation to show students about privacy policies and speaking notes. https://www.priv.gc.ca/youth-jeunes/pp/index_e.asp

The following are the key talking points for each grade section:

Grades 4-6:

- Having fun without giving out too much information

- Your personal information is important. Here is why.

- Why would others want you personal information?
- How can people and companies find your personal information online?
- What can you do?
- What kinds of footprints do you leave online?
- Online footprints are not always private- and they can be permanent.
- Restrict your privacy settings.
- Your online friends.
- and a few tips to make your web experience great.

Grades 7-8:

- Communicating online can also pose risks to your privacy.
- Shaping your online rep.
- Are you familiar with “creeping”?
- Benefits to communicating online.
- Risks to communicating online.
-What we post on the internet is not always private.
- Restrict privacy settings.
- It is important to know who your friends are- online friends vs. online strangers.
- Sexting
- Cyberbullying
- Online impersonation
- What can we do?

Grades 9-12:

- Communicating online can also pose risks to your privacy.
- Shaping your online rep.
- Are you familiar with “creeping”?

- Benefits to communicating online.

- Risks to communicating online.

-What we post on the internet is not always private.

- Restrict privacy settings.

- It is important to know who your friends are- online friends vs. online strangers.

- Sexting

- Cyberbullying

- Online impersonation

- What can we do?

Ontario

1. Embedded in the Curriculum

(K-12)

Ontario disperses Digital Citizenship education, including privacy, across the curriculum. It is mentioned as a concern in over 20 curriculum guides, but it is not embedded in direct curricular outcomes until secondary school.

First, we reproduce the passage that mentions privacy and then the list of curricular guides in which it is published:

“Although the Internet is a powerful learning tool, there are potential risks attached to its use. All students must be made aware of issues related to Internet **privacy,** safety, and responsible use, as well as of the potential for abuse of this technology, particularly when it is used to promote hatred. ICT tools are also useful for teachers in their teaching practice, both for whole-class instruction and for the design of curriculum units that contain varied approaches to learning in order to meet diverse student needs.”

- Social Studies and History and Geography- 2013 revised (1-8)

- Health and Physical Education -2015 revised (1-8)

- The Full-Day Early Learning- Kindergarten Program (1-8)

- The Arts (1-8)
- Language (1-8)
- Science and Technology (1-8)
- Technological Education (9-10)
- Technological Education (11-12)
- Social Science and Humanities (9-12)
- Science (9-10)
- Science (11-12)
- Health and Physical Education (9-12)
- Guidance and Career Education (9-10)
- Guidance and Career Education (11-12)
- French as a Second Language (9-12)
- English as a Second Language and English Literacy Development (9-12)
- English (9-10)
- English (11-12)
- Computer Studies (10-12)
- Canadian and World Studies (9-10)
- Canadian and World Studies (11-12)
- The Arts (9-10)

-The Arts (11-12)

Secondary School Curriculum:

There are quite a number of courses in Ontario secondary education that focus on privacy:

(9-10)

Technological Education- The Ontario Curriculum

http://www.edu.gov.on.ca/eng/curriculum/secondary/teched910curr09.pdf

Grade 10 Open TECHNOLOGY,THE ENVIRONMENT, AND SOCIETY

C2.4 describe legal concepts and issues relating to communications technology and media production (e.g., copyright, **privacy** rights, consent);

D. PROFESSIONAL PRACTICE AND CAREER OPPORTUNITIES

D1.2 identify issues related to Internet safety and personal identity security (e.g., protection of information stored on computers or transmitted over a network, identity theft, cyberstalking, cyberbullying, **privacy** policies).

(11-12)

Technological Education- The Ontario Curriculum

http://www.edu.gov.on.ca/eng/curriculum/secondary/2009teched1112curr.pdf

Grade 11- University/College Preparation

C. TECHNOLOGY,THE ENVIRONMENT, AND SOCIETY

C2.2 describe some of the drawbacks of computer and electronic technology for society (e.g., **loss of privacy**, infringement of intellectual property rights through unlicensed copying and electronic distribution, a more sedentary lifestyle, spam, telemarketing, Internet gambling addictions).

D. PROFESSIONAL PRACTICE AND CAREER OPPORTUNITIES

D2.1 demonstrate an understanding of and adhere to laws applicable to creative content (e.g., laws governing copyright and other creative property rights, domain names, **privacy,** defamation);

D2.2 describe **privacy** and security issues related to the use of communications media technology;

Grade 11 Open

C. TECHNOLOGY,THE ENVIRONMENT, AND SOCIETY

C2.2 identify legal and ethical issues related to communications media production (e.g., copyright, respect of **privacy** and personal information);

Grade 11 Workplace Preparation

C.TECHNOLOGY,THE ENVIRONMENT, AND SOCIETY

C2.2 describe the drawbacks of computer technology for society (e.g., Internet gambling addictions, more sedentary lifestyle, spam, telemarketing, loss of **privacy**).

Grade 12 Open

C. TECHNOLOGY,THE ENVIRONMENT, AND SOCIETY

C2.2 identify legal and ethical issues applicable to communications media production (e.g., copyright, respect of **privacy** and personal information);

Grade 12 Workplace Preparation

D. PROFESSIONAL PRACTICE AND CAREER OPPORTUNITIES

D1.3 research and discuss issues related to Internet safety (e.g., protection of information stored on computers or transmitted over a network, cyberstalking, cyberbullying, **privacy** policies).

D2.1 describe the components of an acceptableuse policy for computers (e.g., restrictions on commercial or personal use, prohibition of inappropriate content and plagiarism, protection of **privacy** and intellectual property rights);

(9-12)

Health and Physical Education- The Ontario Curriculum

http://www.edu.gov.on.ca/eng/curriculum/secondary/health9to12.pdf

Grade 9

C. HEALTHY LIVING

Personal Safety and Injury Prevention

C1.2 demonstrate an understanding of the benefits and risks of using electronic communication technologies (e.g., easy access to useful information and entertainment but also to harmful or undesirable information and entertainment, such as pornography; enhanced ability to stay in

touch with friends but also increased possibility of exposure to sexual predators, bullying, and sexting; ability to communicate one's thoughts and creative efforts to the rest of the world but also increased potential for loss of **privacy**), and describe strategies that they can apply to ensure their safety while using these technologies [IS, CT]

(11-12)

Interdisciplinary Studies- The Ontario Curriculum

http://www.edu.gov.on.ca/eng/curriculum/secondary/interdisciplinary1112curr.pdf

Grade 11 Open - Theory and Foundation

- Specific Expectations:

– identify and describe, with particular reference to each of the subjects or disciplines studied, the principles and practices regarding the safe, ethical, and legal use of information and information technologies (e.g., "netiquette", personal **privacy** and security, copyright, software user agreements).

Grade 12 Open - Theory and Foundation

-Specific Expectations:

– identify the principles, practices, and systems regarding the safe, ethical, and legal use of information technologies (e.g., in terms of ergonomics, personal privacy, and computer security) and describe the consequences of their appropriate and inappropriate use for each of the subjects or disciplines studied.

(11-12)

English- The Ontario Curriculum

http://www.edu.gov.on.ca/eng/curriculum/secondary/english1112currb.pdf

Media Studies-Grade 11 Open

B. MEDIA AND SOCIETY

2.4. examine the ways in which the media and communication technologies can infringe on the **privacy** rights of individuals, and how consideration of those rights affects the behaviour of the media industry (e.g., discuss whether and how school surveillance technologies affect student behaviour; explain why news outlets do not immediately release the names of people who are injured or killed; discuss the conflict between the **privacy** rights of celebrities and the rights of journalists to meet the audience's desire for information; identify the ways in which camera phones are changing expectations of **privacy** in public situations)

(10-12)

Computer Studies - The Ontario Curriculum

http://www.edu.gov.on.ca/eng/curriculum/secondary/computer10to12_2008.pdf

Introduction to Computer Studies- Grade 10 Open

C. Computers and Society

C1.2 explain the impact on privacy of techniques for collecting and processing data (e.g., camera phones, reward programs, targeted advertising, digital rights management, monitoring software);

Introduction to Computer Programming- Grade 11 College Preparation

D. Computers and Society

D3.1 explain how emerging technologies can affect personal rights and **privacy** (e.g. video surveillance, cyberbullying, identity theft);

(11-12)

Canadian and World Studies- The Ontario Curriculum

http://www.edu.gov.on.ca/eng/curriculum/secondary/2015cws11and12.pdf

Grade 12 University/College Preparation

D. SPATIAL SYSTEMS, INTERCONNECTIONS, AND INTERDEPENDENCE

D2.1 analyse the ways in which spatial technologies are used in relation to national and global security and safety and international cooperation, and explain some ethical issues that arise from such uses (e.g., national security versus individual **privacy rights**)

D2.2 analyse the importance and implications of international cooperation in the sharing and maintenance of global communications and navigation networks (e.g., issues of control versus openness, protection from terrorism or criminal activity versus individual privacy rights and freedoms)

Grade 12 University Preparation

E. THE WORLD SINCE 1900

E1.2. describe a variety of developments in science and/or technology during this period (e.g., developments in household appliances, motion pictures, radio and television, automobiles, airplanes, satellites and space travel technologies, computers and cellular technologies, reproductive technologies, medicine or biotechnology, mechanization or robotics, weapons, renewable energy), and assess their impact (e.g., increased mobility, decreased infant mortality rates and increased life expectancy, increased number of wartime casualties, changes in the workplace and in recreation, changes in agricultural practices, "cashless" societies, digital fraud, **challenges to privacy**)

(9-10)

Business Studies

http://www.edu.gov.on.ca/eng/curriculum/secondary/business910currb.pdf

Grade 9 or 10 Open- Information and Communication Technology in Business

Ethics and Issues in Information and Communication Technology

Overall Expectations. By the end of this course, students will:

- demonstrate an understanding of legal, social, and ethical issues relating to information and communication technology;

- analyse **privacy** and security issues relating to information and communication technology;

- assess the impact of information and communication technology on personal health and the environment.

Specific Expectations

- describe **privacy** and security issues related to information and communication technology (e.g., protection of credit card information; cookies; identity theft; spyware; cyber stalking);

- explain the importance of keeping information secure and confidential (e.g., through the use of passwords, encryption, biometric authentication, firewalls);

- analyse the form and potential impact of computer viruses;

- explain how anti-virus software applications in a business environment enhance system security

(11-12)

Business Studies

http://www.edu.gov.on.ca/eng/curriculum/secondary/business1112currb.pdf

Grade 11 Open- Information and Communication Technology: The Digital Environment

Ethics and Issues in Information and Communication Technology

Overall Expectations

By the end of this course, students will:

- demonstrate an understanding of legal, social, and ethical issues relating to information and communication technology;

- analyse **privacy** and security issues relating to information and communication technology;

- assess the impact of information and communication technology on personal health and the environment.

Specific Expectations

- describe **privacy** and security issues related to information and communication technology (e.g., protection of credit card information; cookies; identity theft; spyware; cyber stalking);

- explain the importance of keeping information secure and confidential (e.g., through the use of passwords, encryption, biometric authentication, firewalls);

- analyse the form and potential impact of computer viruses;

- explain how anti-virus software applications in a business environment enhance system security

– identify marketing issues created by changes in information technology (e.g., expanding markets; **privacy** issues; consumers' reactions to junk mail, spam, and information overload);

2. Professional Development

(K-12)

Caring and Safe Schools in Ontario

http://www.edu.gov.on.ca/eng/general/elemsec/speced/Caring_Safe_School.pdf

In a guide on how to maintain discipline for special education students in Ontario schools, a link is given to Media Smarts http://mediasmarts.ca/ as a resource for teachers on the topics of child safety and bullying/cyberbullying. There was no specific article or page referenced, just the website as a whole. The document link does not address privacy however but Media Smarts provides many resources on privacy.

3. Highlights of Board Level and Third Party Initiatives

(Grades 4-6)

Ophea- Healthy Schools Healthy Communities- ConnectED

http://teachingtools.ophea.net/lesson-plans/connected

The Ontario Physical Education Association, a professional association of Phys Ed teachers, offers *ConnectED*, a free online resource easily adapted into classroom curriculum for teaching students in Grades 4, 5 and 6 how to be safer in the ever-changing world of technology.

Developed to give students fundamental problem solving and decision making skills surrounding the online world, *ConnectED* allows them to use these Internet safety rules to make informed decisions online in a way that replicates real life decision making.

The content focuses on Internet etiquette, online **privacy** and security and online relationships (including cyberbullying). *ConnectED* includes grade specific video episodes and lesson plans and includes supports for both educators and parents.

Ophea- Healthy Schools Healthy Communities- Connect ED

http://teachingtools.ophea.net/lesson-plans/cybercops

(Grades 7-8)

CyberCops is a free computer-based educational program developed for teaching students in Grades 7 and 8 about the risks and safety issues surrounding the Internet and helping them recognize and respond to these situations. Designed for use in a classroom setting, each game invites students to assist real life characters in a truly interactive gaming experience. It addresses elements of the Personal Safety and Injury Prevention component of the Healthy Living strand of the H&PE Curriculum (2010) and is available in both English and French. CyberCops is one of several teaching resources that includes:

Mirror Image (for Grade 7 students), introduces students to three criminal behaviours – cyberstalking, Internet luring and child pornography.

Air Dogs (for Grade 8 students) is designed to make young teenagers aware of the consequences surrounding credit card fraud, software piracy and bullying.

The resource also includes a Parent/Teacher Guide, lesson plans that are directly linked to the Ontario Health and Physical Education Curriculum (2010) and tools for students to develop an Internet Safety Plan.

Quebec

1. Embedded in the Curriculum

The Quebec curriculum includes Broad Areas of Learning which are dispersed across the curriculum, Cross-Curricular Competencies that are infused in subject specific domains and traditional subject areas. One of the Broad Areas of Learning is Media Literacy and the Cross Curricular Competencies include “Uses information and communications technologies.” There is no discrete ICT or digital literacy course.

Students go through two Cycles each in Primary and Secondary school. The Broad Areas of Learning and Cross Curricular Competencies remain in place. In our search, we found direct

reference to privacy in the Secondary curriculum, but this does not mean that primary teachers are not teaching privacy concerns as basic Internet safety.

Given the location of digital/media literacy and sub-topics such as privacy in the Broad Areas of Learning and Cross Curricular Competencies, there is no mandated or consistent approach to the teaching and learning of this material.

(7-11)

Quebec Education Program- Secondary Cycle One & Two

http://www1.mels.gouv.qc.ca/sections/programmeFormation/secondaire2/index_en.asp?page=integrateur

1. Cycle 1:

- Broad Areas of Learning:
http://www1.mels.gouv.qc.ca/sections/programmeFormation/secondaire1/pdf/chapter2.pdf

- Cross Curricular Competencies:
http://www1.mels.gouv.qc.ca/sections/programmeFormation/secondaire1/pdf/chapter3.pdf

2. Cycle 2:

- Broad Areas of Learning:
http://www1.mels.gouv.qc.ca/sections/programmeFormation/primaire/pdf/educprg2001/educprg2001-030.pdf

- Cross Curricular Competencies:
http://www1.mels.gouv.qc.ca/sections/programmeFormation/secondaire2/medias/en/3_QEP_Chap03.pdf

1. Cycle 1 & 2 contain the exact same information for Cross Curricular Competencies and Broad Areas of Learning.

- Broad Areas of Learning:

The Broad Areas of Learning: Focal Points for the Integration of Educational Activities

The broad areas of learning, with the cross-curricular competencies, provide a frame of reference that gives coherence and complementarity to educational activities. The complex issues these

areas involve call for the construction of multidisciplinary responses based on various sorts of knowledge. Matters as important as choosing a lifestyle, exercising critical judgment with respect to consumer goods and the media, and making and carrying out plans are too broad to be dealt with in a time slot and context devoted exclusively to one subject.

Focuses of Development

– Awareness of the place and influence of the different media in his/her daily life and in society: media functions (information, entertainment, promotion, influence, propaganda); media consumption habits and guidelines; influence of media messages on his/her world-view and everyday environment

– Understanding of media representations of reality: elements of media language (sound, image, movement, message); comparison between facts and opinions; recognition of the positive and negative impact of media messages; distinction between reality, imagination and virtual reality; the aesthetic qualities of media productions; comparison of media productions based on different techniques and forms of artistic expression

– Use of media-related materials and communication codes: procedure for producing, constructing and distributing media products; use of various techniques, technologies and modes of communication

– Knowledge of and respect for individual and collective rights and responsibilities regarding the different media: intellectual property, freedom of expression, **privacy** and reputation. Like the society of which they are a part, schools bring together students of diverse social and cultural origins, with a variety of traditions, beliefs, values and ideologies. Students therefore confront on a daily basis situations that pose challenges related to cooperation. This makes the school an ideal place for learning to respect others. To enable students to take part in the democratic life of the classroom or the school and develop an attitude of openness to the world and respect for diversity and accept their differences, to be receptive to pluralism, to maintain egalitarian relationships with others and to reject all forms of exclusion. The school also gives students opportunities to experience the democratic principles and values that are the basis of equal rights in our society. This preparation for an active role as citizens should not, however, concern only the students' social development; it depends as much on the acquisition of knowledge and attitudes as on the promotion of a set of shared values and a sense of belonging.

Cross Curricular Competencies

COMPETENCY 6 Uses information and communications technologies

FOCUS:

The rapid development of knowledge and the increasing accessibility and variety of information sources makes the formation and communications technologies (ICT) more and more essential. These technologies give people a new window on the world, with its conventions and contradictions. They have also changed the organization of work, made it easier to perform complex tasks and influenced intellectual life. Students beginning secondary school have varying degrees of competency in this area. They also vary considerably in their views on the educational relevance of these technologies and in their attraction to them. Some students use information and communications technologies regularly and expertly, while others make do with a superficial knowledge and still others have little or no access. In addition, they must foster the students' respect for ethical standards in their use of ICT and ensure that the educational advantages of ICT are reflected in the intellectual, methodological, social and personal development of every student.

- Key Features of Competency 6:

a. Uses appropriate technologies. Carries out various tasks using technological resources

• Evaluates the potential of the available technologies and networks

• Chooses the most suitable tools for the situation

• Applies the interaction, communication and troubleshooting strategies required for a given task

b. Takes full advantage of these technologies. Diversifies his/her use of ICT

• Takes advantage of ICT resources and functions in various types of learning

• Recognizes and uses in a new context concepts and processes he/she has learned previously

• Envisages new ways to use them

• Respects the prevailing values and codes regarding intellectual property and **privacy**

c. Evaluates his/her use of this technology Compares his/her ways of using ICT with those of others

• Recognizes his/her successes and difficulties

• Seeks ways to improve his/her use of these technologies and suggests ways to do this

• Examines the relevance of using ICT by taking into account their contribution to specific tasks

2. Professional Development

(K-12)

Recit

http://recit.qc.ca/

(K-12)

Learn

http://www.learnquebec.ca/

In Quebec, the Ministry of Education funds learning support organizations – Récit and Learn - which develop curriculum and pedagogy that supports the Quebec curriculum, and also become involved in 21st Century literacy initiatives and projects in schools and school boards. Here, for example, is a description of the work of Récit:

Le RÉCIT est un réseau axé sur le développement des compétences des élèves par l'intégration des technologies de l'information et de la communication (TIC). C'est principalement par la formation, le soutien et l'accompagnement du personnel enseignant que le RÉCIT réalise ce mandat, tout en développant une culture de réseau et de partage. Il s'agit d'une structure qui regroupe environ 120 personnes-ressources réparties dans :

- 71 services locaux à la formation générale des jeunes (1 service par commission scolaire et 1 pour les établissements d'enseignement privés);
- 17 services régionaux à la formation générale des adultes (1 service par région administrative et 1 pour la communauté anglophone);
- 12 services nationaux qui assurent un soutien particulier

This network enables a sharing of ideas and resources across the province and also ensures that there is at least one local representative able to serve a particular Board.

3. Highlights of Board Level and Third Party Initiatives

(K-12)

http://www.droitsurinternet.ca/versions.php

Guides pour gérer les aspects juridiques d'Internet et du Web 2.0

The Ministry also has funded the development of this site which provides a broad range of resources that apply to the Internet and responsible use for educators in the Web 2.0 era. The Web site includes a Professional Development resource guide called *Guide pour gérer les aspects juridiques du Web 2.0 en milieu scolaire* http://www.droitsurinternet.ca/GuideSCOLfinal.pdf written by Universite de Montreal researchers, Pierre Trudel and France Abran. This is a substantial resource guide that raises a wide variety of issues related to safe Internet use in school settings. A good sense of the range of topics covered in the guide can be drawn from the description of risks in Section A 2. These risks include: divulging personal information online; non-authorized use of images and breach of authorship; damage to one's reputation; online harassment; personal information used by others or out of original context; stranger danger; identity theft; information theft; and persistence of information (online).

(K-12)

educaloi.qc.ca- Privacy and the Internet

https://www.educaloi.qc.ca/en/youth/capsules/privacy-and-internet

Privacy and the Internet

This law resource page is well written and the material on Privacy and the Internet is well presented for a high school audience.

"Your privacy refers to your personal or intimate life. It includes **information that can identify who you are.** This information belongs to you, and you have a say in what happens to it. In other words, you decide what information you want other people to have and for what purpose. Here are some examples of private information:

- your age
- your physical features (weight, height, fingerprints, etc.)
- the people around you (for example, your family or friends)
- where you live
- your favourite activities and life habits
- whether you are in a relationship
- your state of health
- your sex life and sexual orientation
- your image (photos or videos)

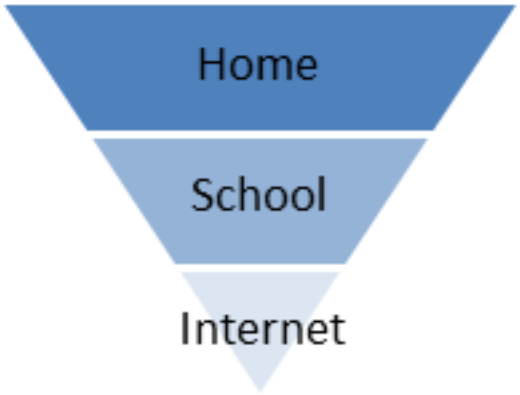
- private telephone conversations
- your voice
- your personal documents, such as your passport and social insurance card

Even if your friends and family know most of this information, it is up to you whether to share it with others, for example on the Internet or social networks.

Protecting Your Privacy at Home, at School and on the Internet

Protecting your privacy can be different at home, school and on the Internet.

So, if you write in a journal at home, there is little chance that anyone else will read it. But if you post your journal on the Internet, everyone will be able to see it.



Protecting Your Privacy on the Internet

The Internet, social networks and online video games allow all sorts of information to be shared quickly and easily. This is "cyberspace," and lots of people have access to it.

It is up to you whether to share information about yourself over the Internet. Here are a few things to keep in mind before posting personal information:

1. Your Information Is Important

Information such as your mother's name, the town you were born in and your date of birth might not seem important to you, and you might see nothing wrong with mentioning these things in your user profile.

But did you know that a dishonest person could misuse this information? For example, this information could allow someone to figure out your passwords and get into your online accounts.

This information is also important to companies that want to know about your habits and interests so they can send you personalized advertising.

2. Whatever You Post Can Last Forever

Often, it only takes a click to post a picture or information on the Internet. Posting is easy, but it is almost impossible to reverse the process. This is why you should only post information that you are comfortable with everybody seeing (such as your parents, your teacher or a future employer).

3. Your Friends' Privacy

In the virtual world, protection of privacy is more difficult if you often post personal information. You should also be careful about your friends' personal information. **This personal information belongs to them.**

Insist on Respect for Your Privacy

If someone is talking about you on the Internet without your permission or reveals information that you want to keep to yourself, this person is not respecting your privacy. It could be embarrassing to you or ruin your reputation.

You have a right to control how others use some of your personal information by limiting public access to it. You must give them permission to use it.

You can ask the person who posted the information, picture or video to remove it. If the person refuses, you can contact the site involved (for example, Facebook, Instagram, YouTube, etc.) and ask that it be removed. You should do this as soon as possible, especially if the picture or video is sexual. **You can get help** to do this.

Lastly, you can also ask a judge to order this person to remove the information and possibly even pay you money to make up for the harm.

Did you know?

The right to privacy is a fundamental right, but there are some exceptions. For example, personal information can be shared in cases like these:

- You are in the public eye because of the type of work you do (e.g., actor, politician, professional athlete).
- You decided to post your personal information on the Internet.
- The law requires you to provide information that can identify you. For example, you were pulled over for speeding and the police ask for your name and address.

- The publication of your personal information is of "public interest." This has to do with informing the public of a particular situation. The public's right to information can take priority over your right to privacy."

Wired Safety: http://www.wiredsafety.com/

This US-based site has many internet safety resources for schools, teachers, parents, and students. The extensive site explores safety issues for Internet users of all ages. There is information specifically for teachers and librarians as well as separate sections for kids, tweens and teens.

"Privacy and Passwords: Privacy and Data Protection

Privacy means different things to different people. To some it is the right to be left alone. To others it's protecting their personal information and not sharing secrets. Sometimes it means deciding who has access to what information about you and what they can do with it. And to everyone, it means you have or should have control over some things about you, without having to share them at all.

The laws that govern privacy and related human rights range from state, provincial and federal constitutions or charters of rights, the Magna Carta, data protection laws and regulations, statutes, common law to contractual rights and consumer protection.

Typically, privacy laws cover sensitive information (racial, religious, union membership, governmental benefits information, victimization records, school records, etc.), financial information (social security numbers or social insurance numbers, bank account and credit card information, credit histories and creditworthiness, etc.), health information (insurance, health records, disabilities, risks, family health records, etc.) and personal information collected from or about children (which may cover minors, typically 18 or under, or preteens, or youth under the age of fourteen, depending on the jurisdiction and country).

Information collected about us online generally falls into one of three types: **personally identifiable information** ("PII, "where it can be tracked back to you and tied to your real name, contact information etc.), **generic information** (which removes all personally identifiable information and just stores the general information, such as gender, age, state or town you live in, etc.) and **profile information** (that may tie to your online identity, but doesn't disclose who you are in real life).

(7-11)

Office of the Privacy Commissioner

Youth Presentation Packages (Grades 7-8; 9-12)

Protecting Your Online Rep

We noted the availability of these resources, but could not track their use. This is something the Office must have some statistics on.

https://www.priv.gc.ca/youth-jeunes/pp/4-6_e.asp

https://www.priv.gc.ca/youth-jeunes/pp/9-12_e.asp

Atlantic Provinces

General Outcomes – These apply to Nova Scotia, New Brunswick, PEI, Newfoundland & Labrador)

(K-12)

Foundation for the Atlantic Canada Technology Education Curriculum (Nova Scotia, New Brunswick, PEI and Newfoundland and Labrador)

http://www.ed.gov.nl.ca/edu/k12/curriculum/documents/teched/te_found_nf-lab_full.pdf

General Curriculum Outcomes for Technology Education:

These five general curriculum outcome statements articulate what students are expected to know and be able to do upon completion of study in technology education (Grade 12). These statements provide a concise description of the student as a technologically literate and capable citizen. Privacy can be present in GCO 3 & 4, and it is highly relevant in GCO 5.

GCO 1: Technological Problem Solving Students will be expected to design, develop, evaluate, and articulate technological solutions.

GCO 2: Technological Systems Students will be expected to operate and manage technological systems.

GCO 3: History and Evolution of Technology Students will be expected to demonstrate an understanding of the history and evolution of technology, and of its social and cultural implications.

[3.103] explore the role that technology plays at home, in school, and in the community

[3.404] critically evaluate the effects of accelerating rates of technological change on self and society

GCO 4: Technology and Careers Students will be expected to demonstrate an understanding of current and evolving careers and of the influence of technology on the nature of work.

[4.101] explore ways that technology affects the nature of work at home, in the school, and in the community

GCO 5: Technological Responsibility Students will be expected to demonstrate an understanding of the **consequences of their technological choices**.

[5.101] demonstrate a growing awareness of the **rights and responsibilities** of others and self when using technological resources

[5.103] identify **risks** that might be present if specific technological actions are taken, and explore ways to manage them

[5.201] demonstrate respect for the **rights and responsibilities** of others and self when using technological resources

[5.202] demonstrate increasing awareness of healthy and **safe practices** when engaging in technological activity

[5.203] demonstrate increasing awareness of the need to take proper measures to manage technological **risk**

[5.303] develop and demonstrate **risk-management** strategies for a variety of technological activities

New Brunswick

1. Embedded in the Curriculum

(12)

Media Studies Curriculum (September 2014)

http://www2.gnb.ca/content/dam/gnb/Departments/ed/pdf/K12/curric/English/MediaStudies120.pdf

This document is a grade 12 program of study called: Media 120. The course is divided into 4 suggested units in the curriculum. The units are:

Media Literacy: Foundational Knowledge

1. Film, Television, and Video
2. Advertising, Marketing and You
3. **Media and the Internet**
4. Self Study Project

The unit pertaining to **privacy** can be found in **"Media & The Internet"**

Guiding questions for this unit are as follows:

- How free are the resources on the internet?
- What are the costs related to free social media and other internet sites?
- What is your identity? Is the digital self reflective of the actual self?

Unit Overview:

Media and the Internet

In this unit students will investigate various ethical, legal, privacy and moral issues regarding media and the Internet. Students will examine privacy issues and the potential influence of social networking websites along with the potential benefits and consequences of sharing and posting information. Students will be encouraged to think critically about ethical topics such as fraudulent websites and the legalities and moral challenges surrounding the downloading of copyrighted material. Students will also have an opportunity to explore how other countries deal with the management of information, leading to an examination of censorship versus protectionism, and hate speech versus free speech.

(12)

Law 120 Curriculum

http://www2.gnb.ca/content/dam/gnb/Departments/ed/pdf/K12/curric/SocialStudies/Law120.pdf

This is a grade 12 program of study that has 14 Units. One of the units briefly touches on privacy. **This is Unit 4: Contracts**. The unit has Outcomes (overall and specific expectations)

and Suggestions for Learning and Teaching. Privacy is mentioned in the 6th Suggestion for Learning and Teaching:

6. Compare and contrast the privacy provisions of traditional and online contracts.

2. Highlights of Some Third Party Initiatives

(K-12)

Cyber Safe Girl

http://www.cybersafegirl.ca/index.php3?number=1044333&lang=E

This website is referenced by the Government of New Brunswick site, under Cyber Safety. This site is a project of the Atlantic Ministers Responsible for the Status of Women in Canada (New Brunswick, Newfoundland, Nova Scotia and PEI). Cybersafe Girl is a public education program developed to provide information to girls, parents and educators about how girls can be safe online.

Nova Scotia

1. Embedded in the Curriculum

There are a number of courses in the Nova Scotia curriculum that include privacy concerns.

(Primary- 9)

Nova Scotia Curriculum Documents- Learning Outcomes Framework

Learning Outcomes Framework

This document includes K-6 information however privacy **first appears in grade 4.** The following are the places that privacy is included:

-Information and Communication Technology 4 Digital Citizenship (DC) (Grade 4)

Students act ethically and with critical understanding while using information and communication technology in the context of local and global communities.

DC1: Students will be expected to understand and demonstrate behaviours that ensure their own and others' health, safety, and privacy.

DC2.2.4: Students will be expected to follow, with teacher assistance, ethical and responsible online digital citizenship by

- presenting information accurately
- respecting personal privacy and safety
- choosing appropriate language for the intended audience and purpose

-Information and Communication Technology 5 Digital Citizenship (DC) (Grade 5)

Students act ethically and with critical understanding while using information and communication technology in the context of local and global communities.

DC1: Students will be expected to understand and demonstrate behaviours that ensure their own and others' health, safety, and privacy.

DC2.2.5: Students will be expected to demonstrate, with some teacher assistance, ethical and responsible online digital citizenship by

- presenting information accurately
- respecting personal privacy and safety
- choosing appropriate language for the intended audience and purpose

-Information and Communication Technology 6 Digital Citizenship (DC) (Grade 6)

Students act ethically and with critical understanding while using information and communication technology in the context of local and global communities.

DC1: Students will be expected to understand and demonstrate behaviours that ensure their own and others' health, safety, and privacy.

DC2.2.6: Students will be expected to demonstrate, with some teacher assistance, ethical and responsible online digital citizenship by

- presenting information accurately

- respecting personal privacy and safety
- choosing appropriate language for the intended audience and purpose

Learning Outcomes Framework

- Grade 7 to 9 document:

The following are the places that privacy is included:

-Information and Communication Technology Integration **(Grades 7–9)**

Key-Stage Curriculum Outcomes:

By the end of grade 9, in addition to the grade 6 outcomes, students will be expected to:

Grade 7

SOCIAL, ETHICAL, AND HUMAN ISSUES (SEHI)

- The understanding associated with the use of ITC, 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 9.4 (relates to 6.2, 6.7, 6.8) demonstrate an understanding of, and a commitment to, accuracy, ethical behaviour, and personal privacy and safety as they create and distribute information about themselves, others, and curriculum topics under study

Grade 8

SOCIAL, ETHICAL, AND HUMAN ISSUES (SEHI)

- The understanding associated with the use of ITC, 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 9.4 (relates to 6.2, 6.7, 6.8) demonstrate an understanding of, and a commitment to, accuracy, ethical behaviour, and personal privacy and safety as they create and distribute information about themselves, others, and curriculum topics under study

Grade 9

SOCIAL, ETHICAL, AND HUMAN ISSUES (SEHI)

- The understanding associated with the use of ITC, 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 9.4 (relates to 6.2, 6.7, 6.8) demonstrate an understanding of, and a commitment to, accuracy, ethical behaviour, and personal privacy and safety as they create and distribute information about themselves, others, and curriculum topics under study

Learning Outcomes Framework

Information and Communication Technology— Essential Learning Outcomes 2015–2016

http://www.ednet.ns.ca/files/curriculum/ITC-P-3ProgressionChart-RevAug26-2015.pdf

ESSENTIAL LEARNING OUTCOMES AND PERFORMANCE INDICATORS

ICT Primary Indicators:

DIGITAL CITIZENSHIP Outcome 1:

- Students will be expected to understand and demonstrate behaviours that ensure their own and others' health, safety, and privacy

- Students will be expected to understand and participate in classroom and school activities establishing safe and healthy routines as they use ICT for learning.

- Students will be expected to work with the teacher to develop safe routines for using ICT responsibly, ensuring their own and others' health and safety.

- Students will be expected to demonstrate safe routines for using ICT responsibly, ensuring their own and others' health and safety

2.Highlights of some Board Level and Third Party Initiatives

The Nova Scotia Department of Education has licensed Media Awareness Network's Web Awareness Workshop Series for all publicly funded schools. The flyer for the Web Awareness Workshops is available at http://www.ece.gov.nt.ca/files/Early-Childhood/mediasmarts/WebAwareness%20WORKSHOPS%20Series.pdf

The Web Awareness Workshop Series includes six professional development (PD) workshops that provide a comprehensive program to help teachers of Grades K to 12 and librarians understand and address cyberbullying issues, online safety, marketing, privacy and information authentication. The workshops include Web-based self-directed tutorials, PowerPoint slides with speaking notes, workshop guides, Webographies and participant handouts – a package of tools that allow educators and librarians to manage their own PD activities and facilitate PD workshops on these topics for their colleagues.

Workshop Eg. - Kids for Sale: Online privacy and marketing

This workshop offers a sampling of online commercial environments that attract children. It explores current strategies for marketing to kids and the ways in which children's privacy may be compromised online. The workshop underlines how important it is for kids to know when they are being informed, entertained or marketed to online and also to understand how their personal information may be used.

PEI

1. Embedded in the Curriculum

Information Technology Communication 401A Curriculum Document (10-12)

Unit: Computer Literacy

General Curricular Outcome:

- CL7: explain computer ethics as it applies to copyright law, privacy issues, and social interaction

Specific Curricular Outcome:

- CL7.4 Is it ethical to access a private wireless network that has been left open without **security** (hot spot)?

CL7.5 Research recent **security/privacy** concerns about an online service such as Facebook or Second Life. Report findings.

CL7.6 Prepare a short report for a younger relative (or his or her parents) explaining how **to safely use** online social networking sites.

CL7.7 Prepare an online survey to determine the degree of knowledge peers possess about **online privacy** and the use of social networking sites. CL7.8 Create a skit or video demonstrating **a privacy concern** with a social networking site. e.g.: someone writing personal information on a wall in real life for everyone to read, telling everyone in class/school a personal piece of information face-to-face from the front of a room, etc.

CL7.9 Demonstrate ethical behaviour in regards to copyright laws and due diligence in regards to online privacy and personal safety.

Information posted on Social Networking sites are stored and shared through multiple databases. Privacy and safety must be considered when posting to online sites such as Facebook. A survey of profiles on a college social networking site provided the following findings:

• 91% of profiles contained an image

• 88% revealed a birth date

• 40% revealed a telephone number (29% a cell phone number)

• 51% list current residence

• other information included class schedule, political views, and whether in a current relationship

Introductory Computer Studies CMP 521A Curriculum Document (10-12)

http://www.gov.pe.ca/photos/original/cmp.pdf

Unit: Computer Literacy:

General Curricular Outcome:

- LY3: adhere to intellectual property laws and demonstrate ethics in information technology
- LY4: examine data privacy issues

Specific Curricular Outcome:

- LY3.1 Prepare a list of questions for a guest speaker on the topics of copyright laws, privacy, and/or ethics.
- LY4.6 Prepare an online survey to determine the degree of knowledge peers possess about online privacy and the use of social networking sites.
- LY4.4 Research recent security/privacy concerns and rights about online services such as wiki, blog, or collaborative documents.
- LY4.7 Create a skit or video demonstrating a privacy concern with a social networking site. e.g.: someone writing personal information on a wall for everyone to read, etc.

Creative Multimedia- CMM 801A Curriculum Document (10-12)

Unit: Video/Audio Production Unit:

General Curricular Outcome:

- VP 7: examine and become familiar with copyright laws, privacy and ethics in video and audio productions

Specific Curricular outcome:

- VP 7.1: Prepare a list of questions for a guest speaker on the following topics: copyright laws, privacy, and ethics

2. Professional Development

(K-12)

Prince Edward Island Department of Education, Early Learning and Culture: Curriculum Guides by Subject

http://www.gov.pe.ca/eecd/index.php3?number=1051663&lang=E

This site has all of the curricular guides by subject. One of the subjects is Communication and Information Technology – this is the only subject exploring digital citizenship/privacy

Communication and Information Technology (Grades 1-9)

Social, Ethical and Health (only unit including privacy)

Unit: Social, Ethical and Health.

Curriculum Expectations:

- E2.6: adhere to copyright and privacy laws, give credit to sources of information (MLA, APA)
- E2.7 identify ethical issues involved with Internet content, awareness of inappropriate use of technology
- E2.8 demonstrate caution before sending personal information over the internet

3. Highlights of Board and Third Party Initiatives

(K-12)

PEI Kids- Internet Safety Tips

http://www.peikids.org/what-you-need-to-know/parentscaregivers/internet-safety-tips/

Since 1985, PEI Kids has served the Greater Mercer County community with the mission of promoting and maintaining a safe environment for all children. PEI Kids provides community-

based programs relating to personal safety, child sexual abuse prevention and counseling, school safety and bullying, anger management, juvenile intervention and gang prevention, and support services for children in foster care.

PEI Kids is dedicated to promoting and maintaining a safe environment for all children. PEI Kids works with the child, family, and caregiver to provide prevention, intervention, and advocacy programs relating to personal safety, sexual abuse, and the overall well-being of the child. Included in this mandate, is the production and circulation of some Internet Safety advice:

Internet Safety Tips:

Cyberbullying is the use of technology, such as cell phones and the Internet, to degrade, harass or humiliate another person or group of people. Parents are instrumental in keeping their children safe from cyberbullies. Below are a few Internet safety tips:

- Monitor your child's online activities. Keep your computer in a common space like a family room, not in a child's bedroom.
- Speak regularly with your child about his or her online activities and set boundaries on when your child can use the computer as well as cell phones.
- Talk specifically about cyberbullying and encourage your child to tell you immediately if he or she is the target of cyberbullying.
- Explain that cyberbullying is harmful and unacceptable behavior. Outline your expectations for responsible online behavior and make it clear that there will be consequences for inappropriate behavior such as restricted Internet or cell phone privileges.
- Consider installing parental control filtering software and/or tracking programs. However, don't rely only on these tools. They are not foolproof against cyberbullies.
- Ask your child for his or her password, if he or she has one. Although your child may view this as an invasion of privacy, concerns for his or her safety may override any privacy concerns.

Newfoundland

1. Professional Development

(K-12)

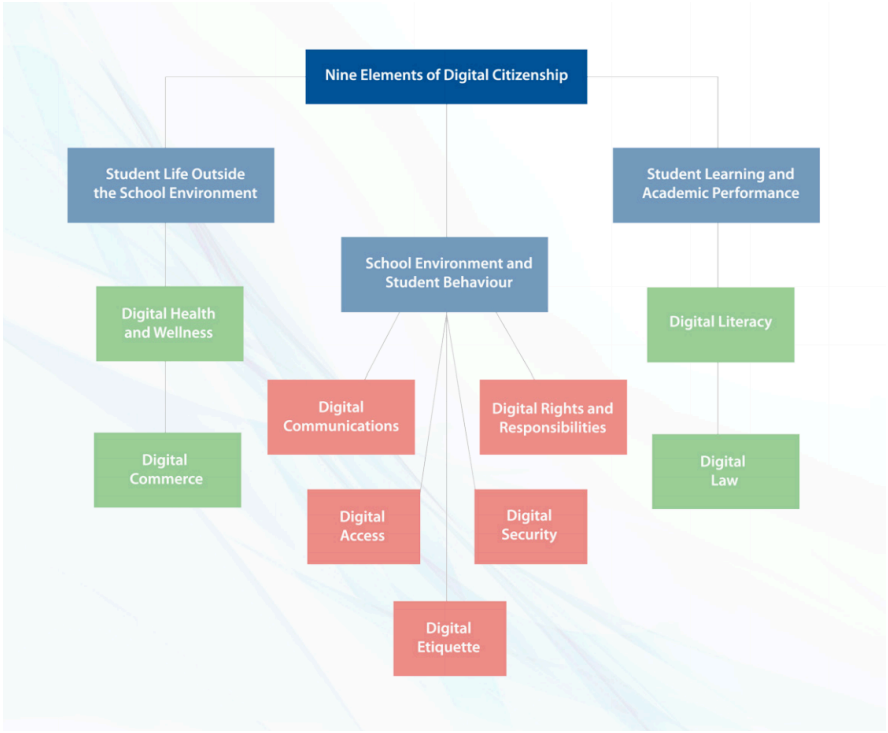
Department of Education and Early Childhood Development- Safe and Caring Schools

http://www.ed.gov.nl.ca/edu/k12/safeandcaring/index.html

Safe and Caring Schools

The Department of **Education and Early Childhood Development** is a partner in the Violence Prevention Initiative of the Government of Newfoundland and Labrador. In support of this initiative, the Student Support Services Division of the Department of Education and Early Childhood Development has established a Safe and Caring Schools Initiative to promote safe and caring learning environments.

The Safe and Caring Schools Policy (2013) iincludes 6 Procedures in implementing policies. The 5th procedure is Teaching Digital Citizenship which utilizes the work of Mike Ribble (2013) which are *Nine Elements of Digital Citizenship*. The elements are as follows:



With the use of these 9 elements, the document proposes some ways of incorporating privacy into specific grades. These ways are as follows:

Grades K-2: Start building a foundation of great digital citizenship skills by reinforcing the ideas of kindness, curiosity, and safety that permeate early elementary education. These age-appropriate, 45-minute lessons introduce young learners to concrete concepts and behaviours within the abstract world of digital literacy and citizenship. These fifteen lessons give students a safe way to explore all that technology affords by delving into the basics of Internet safety, privacy, and security; introducing concepts of information literacy; and emphasizing online interpersonal skills.

Digital Literacy and Citizenship for Grades 3-5: Help upper elementary students learn to balance the responsibility that comes with accessing our ever-evolving digital world. The lessons in these units revisit the fundamentals of Internet safety, privacy, security, and information literacy covered in the units for grades K-2, while weaving in the challenges and opportunities of collaborating in online communities. These 45-minute lessons put more emphasis on the concepts of becoming a responsible and respectful communicator online than those designed for lower elementary school students.

Digital Literacy and Citizenship for Grades 6-8: Support middle school students' desire to experiment and explore online with these fifteen lessons. Empower them to reflect critically on their digital lives: their use of media, their understanding of the broader landscape, and their participation in the always-on community. These developmentally appropriate lessons encourage middle schoolers to hone their digital literacy and citizenship skills by putting a particular emphasis on how individuals interact with and impact others in the digital world. Topics include maintaining healthy relationships, communicating respectfully, and developing a positive online reputation.

Digital Literacy and Citizenship for Grades 9-12: Challenge high school students to take perspective on the opportunities and potential pitfalls of the digital world. These age-appropriate, 45-minute lessons use rich discussions and ethical debates to cover the digital literacy and citizenship topics including relationships, identity, respect, and privacy. The lessons highlight how teens can be mindful when curating their digital footprints and how they can take ownership of their digital roles by using today's technologies to create, publish, and share their own creative work.

2. Highlights of Board and Third Party Initiatives

(K-12)

Newfoundland and Labrador English School District- Internet and Social Media Safety

https://www.nlesd.ca/public/internetsafety.jsp

This is a website for the **English District School Board** of Newfoundland and Labrador and includes a variety of internet safety resources for students, parents and outlines the school action plans for digital citizenship lessons. The resources outlines are as follows:

- Media Smarts
- Cyber Safe Girl
- The Door That's Not Locked
- Privacy commissioner of Canada – Youthprivacy.ca

School Action Plan:

In the 2014-15 school year, the District has introduced an Internet and Social Media Safety (ISMS) Action Plan for Grades 1 through 12 with the goal of developing both an immediate and a long-term strategy to help our teachers better inform our students about the use of modern technology. Now in its second year, the plan is derived from the Department of Education's Safe and Caring Schools Policy, 2013 and the elements of Digital Citizenship, and have been updated with all new lessons for the 2015-16 school year. The action plan is designed to provide guidance to our students on using technology, smart phones and social media and uses recommended resources to assist teachers in completing instruction on these topics. The vast majority of schools are using an online educational program and are having discussions on these topics. These efforts are expected to continue, but supplemented by the latest lessons. The District believes the more information we provide our students, the better prepared they are to face the challenges ahead. Again, to ensure they are relevant to the latest in Internet and social media trends and issues, all lessons will be updated annually and new materials for each grade category will be provided to schools.

A general outline of the topics to be covered and the resources being used are found below. For specific lesson plan information for your student, please feel free to contact your classroom teacher or school administration.

Digital Citizenship Lessons

Grade Level	Lessons
Grades 1 to 3	• Digital Etiquette • Rights and Responsibilities • Digital Communications
Grades 4 to 6	• Digital Access • Digital Commerce • Digital Literacy
Grades 7 to Level III	• Digital Law • Digital Health and Wellness • Digital Security

(K-12)

Media Smarts

www.mediasmarts.ca

• Passport to the Internet: This resource teaches younger students (Grades 4-8) to use online tools and websites in a secure and ethical manner. Using simulated models of the most popular Internet environments, this interactive resource focuses on online safety, how to determine whether information is credible, recognizing marketing ploys, protecting privacy, managing online relationships, and dealing with cyber-bullying.

• My World: This resource helps students in Grades 9-12 develop decision-making and analytical skills necessary to positively engage with digital media. My World uses imitations of online environments, such as search engines, instant messaging, social networking sites and file-sharing, to teach students digital literacy skills. Students engaged in My World assume a variety of roles – student, friend, peer and mentor – as they use simulated online tools to address bullying and ethical behaviour, do homework, manage relationships, and protect their privacy.

• Web Awareness Workshop Series: Six professional development workshops help educators

Northwest Territories

1. Embedded in the Curriculum

(K-12)

Literacy with ICT Across the Curriculum: Guide to Infusion (2012)

https://www.ece.gov.nt.ca/files/Early-Childhood/LwICT%20INFUSION%20GUIDE%20-%202012.pdf

Digital literacy is infused through and across the curriculum in NWT. This guide sets forward the framework for this approach.

The guide was created to aid in the instruction of what it is to be a 21st century citizen. A 21st citizen should: Construct Identity in Multiple Contexts, Participate Actively in Collective Intelligence and Sustainable Common Good, Develop Literacy and Think Critically, **Use, Synthesize, and Create Information Products** Ethically with Current and Emerging Tools and Communicate Effectively with Diverse Audiences. The guide includes privacy in the following ways:

Construct Identity in Multiple Contexts

Overview: The 21st Century citizen -is mindful of one's personal needs and present surroundings that promotes emotional, physical and spiritual well-being.

-communicates and builds relationships.

-establishes a balance between online and offline lifestyles.

-understand ones' knowledge, skills, attitudes, values, in comparison and contrast with the diverse contexts of others.

-develops the dynamic ability to act on this understanding by learning, unlearning, and relearning in a lifelong development of identity and meaning making.

Construct Identity:

-metacognition, reflection

-sense of self (emotional, physical, spiritual well-being and resilience),

-mindful awareness (the relaxation response)

-development of personal potential and **ethical consciousness**

-coherence of all facets of identity, online and offline

-recognition of the right to privacy,

-awareness of personal affinities and memberships

Multiple Contexts: -cultural, social, global, political, economic, and environmental understanding

This also includes an inquiry component that includes privacy for the 5 expectations laid out for the 21st century citizen:

Inquiry Component: Ethics and Responsibility The first Attitude of Learning in the Affective Domain, Responsibility and Ethics, refers to knowing about, demonstrating beliefs about, and valuing policies, guidelines, and behaviours for **using ICT ethically,** responsibly, and safely, including **protection of privacy** and of intellectual property. Learners are expected to demonstrate ethical and responsible behaviour at all times when using ICT.

(K-12)

Northwest Territories- Education, Culture and Employment: LITERACY WITH INFORMATION AND COMMUNICATION TECHNOLOGY (LWICT)

https://www.ece.gov.nt.ca/early-childhood-and-school-services/school-services/curriculum-k-12/literacy-information-and

Following is a discussion of the infusion approach to digital literacy taken by the NWT.

Background

Today, technology is a part of almost every aspect of life and learning. Technology enables work and communication for business and pleasure often with a strong emphasis on hardware,

software, portable devices, and "apps." However, it is not enough for students to be merely "ICT literate". 21st Century citizens need a broader literacy that guides the use of these tools and applications. This "literacy with ICT" includes "learning about and choosing ICT to critically, creatively, and ethically use, produce, and communicate meaning."

ICT is best *infused* into inquiry processes across the K to 12 curriculum such as:

- planning and questioning;
- gathering and making sense;
- producing to show understanding; and
- communicating and reflecting.

These critical and creative acts will be strongly influenced by affective considerations of **ethical and responsible use**, implications for society, collaboration, and personal metacognition, motivation, and confidence.

While this K-12 perspective of ICT-supported inquiry deemphasizes the teaching of ICT merely as a set of skills, it does not in any way minimize the need for more technically oriented CTS courses at the high school level. Neither does this perspective minimize the need for "good technique" and facility that yields greater clarity and artistry.

Through education and practice, students will learn:

- how to critically, creatively, and ethically use a variety of information and communication technologies to problem solve, make decisions, inquire, collaborate, demonstrate, and communicate;
- how technology applications and systems often have similar designs and functions that can be learned and the knowledge transferred to new devices and contexts;
- how ICT can positively impact relationships; and
- how to determine which processes, tools and techniques are appropriate for various contexts.

2. Highlights of Board Level and Third Party Initiatives

(K-12)

Media Smarts

www.mediasmarts.ca

The NWT subscribes to the following resources produced by Media Smarts,=.

• Passport to the Internet: This resource teaches younger students (Grades 4-8) to use online tools and websites in a secure and ethical manner. Using simulated models of the most popular Internet environments, this interactive resource focuses on online safety, how to determine whether information is credible, recognizing marketing ploys, protecting privacy, managing online relationships, and dealing with cyber-bullying.

• My World: This resource helps students in Grades 9-12 develop decision-making and analytical skills necessary to positively engage with digital media. My World uses imitations of online environments, such as search engines, instant messaging, social networking sites and file-sharing, to teach students digital literacy skills. Students engaged in My World assume a variety of roles – student, friend, peer and mentor – as they use simulated online tools to address bullying and ethical behaviour, do homework, manage relationships, and protect their privacy.

• Web Awareness Workshop Series: Six professional development workshops help educators

Nunavut

Nunavut draws much of its curriculum from other provinces, primarily Alberta and NWT. Some curriculum is developed for and by Nunavut residents and here a big focus is on Inuktitut language materials. Nonetheless, there is also an intended goal expressed by the Department of Education to develop Nunavut-specific 21st century literacy materials. At present, there is no specific material on digital citizenship related issues in the curriculum.

(K-12)

http://www.gov.nu.ca/sites/default/files/nu_cur_guide_2015-2016_final.pdf

APPENDIX – Web searches

British Columbia

(6-9)

Building Student Success- BC's New Curriculum:

Applied Design, Skills and Technologies

6- https://curriculum.gov.bc.ca/curriculum/adst/6

7- https://curriculum.gov.bc.ca/curriculum/adst/7

8- https://curriculum.gov.bc.ca/curriculum/adst/8

9- https://curriculum.gov.bc.ca/curriculum/adst/9

(8-10)

Information Technology 8-10

http://www.bced.gov.bc.ca/irp/pdfs/applied_skills/1996infotech810.pdf

(11-12)

Information and Communications Technology Curriculum

http://www.bced.gov.bc.ca/irp/pdfs/applied_skills/2003infotech1112.pdf

(10-12)

Curriculum 10-12 First Drafts: Proposals for Grades 10-12 curriculum represent a first step toward articulating the standards for the graduation learning years.

https://curriculum.gov.bc.ca/curriculum/10-12

(K-12)

Privacy And Security ¬ A digitally literate person knows how to protect his/her privacy, respects the privacy of others, and employs strategies to maintain information and data security online.

Link: https://www.bced.gov.bc.ca/dist_learning/docs/digital-literacy-framework.pdf

(K-7)

HEALTH AND CAREER EDUCATION K TO 7- Assessment and Achievement models- Integrated Resource Package 2006

http://www.bced.gov.bc.ca/irp/pdfs/health_career_education/2006hcek7.pdf

(K-12)

A K-12 Primer for British Columbia Teachers Posting Students' Work Online

http://etec.ctlt.ubc.ca/510wiki/images/2/2b/Primer_on_Posting_Minor_Students_Final.pdf

(K-9)

The Door That is Not Locked.

http://www.thedoorthatsnotlocked.ca/app/en/teacher/5-7/landing

(K-12)

Privacy Compass

Link: http://privacycompass.ca/

(Grades 6-12)

"The White Hatter"- Internet Safety for Schools Program through Personal Protection Services Inc.

http://www.personalprotectionsystems.ca/programs/internet-safety/the-white-hatter.html

Yukon

(K-12)

Yukon Government Education: Curriculum

http://www.education.gov.yk.ca/curriculum.html

Alberta

(K-12)

Alberta Education: Programs of Study: Information and Communication Technology

https://archive.education.alberta.ca/teachers/program/ict/programs/

-Division 3:
https://archive.education.alberta.ca/teachers/program/ict/programs/division/div3/

-Division 4:
https://archive.education.alberta.ca/teachers/program/ict/programs/division/div4/

(Gr. 9)

ICT Illustrative Examples Database

https://archive.education.alberta.ca/teachers/program/ict/ie/

(K-12)

Alberta Education: Tips for Safe Internet Use

https://archive.education.alberta.ca/teachers/resources/internettips/

(K-12)

Learning and Technology Policy Framework (2013- 2015)- Administrator Resources- Alberta Education

https://archive.education.alberta.ca/admin/technology/

1. Bring Your Own Device: A Guide for Schools

https://archive.education.alberta.ca/media/6749210/byod%20guide%20revised%202012-09-05.pdf

2. Digital Citizenship Policy Development Guide

https://archive.education.alberta.ca/media/6735100/digital%20citizenship%20policy%20development%20guide.pdf

3. Baseline Technology Assessment Provincial Final Report (2015)

https://archive.education.alberta.ca/media/15225884/ae-baseline-technology-assessment-final-report.pdf

(K-12)

4. Be Web Aware: http://www.bewebaware.ca/english/privacy.html
5. Cybertip.ca: https://www.cybertip.ca/app/en/internet_safety-for_children
6. Social Smarts: Privacy, the Internet and You: https://www.priv.gc.ca/youth-jeunes/fs-fi/res/gn_index_e.asp

Saskatchewan

(11)

Saskatchewan Curriculum- Communication Media 10, 20, 30

https://www.edonline.sk.ca/bbcswebdav/library/curricula/English/Practical_And_Applied_Arts/Communication_Media_10_20_30_2010.pdf

(11-12)

Saskatchewan Curriculum- Computer Science 20, 30

https://www.edonline.sk.ca/bbcswebdav/library/curricula/English/Science/Computer_Science_20_30_1999.pdf

(12)

Saskatchewan Curriculum- Law 30- the Law and You

https://www.edonline.sk.ca/bbcswebdav/library/curricula/English/Social_Studies/Law_30_2002.pdf

(3-12)

Digital Citizenship Education in Saskatchewan Schools

http://publications.gov.sk.ca/documents/11/83322-DC%20Guide%20-%20ENGLISH%202.pdf

(K-9)

Saskatoon Police Service: Saskatchewan Internet Child Exploitation Unit - 'Safer Internet Day'

http://saskatoonpolice.ca/news/201191

(K-12)

SaskTel- I am Stronger

http://iamstronger.ca/

Manitoba

Safe Schools Manitoba- Educator Resource page

http://www.safeschoolsmanitoba.ca/educatorsResources.php

1. https://www.cybertip.ca/app/en/about

2. http://www.rcmp-grc.gc.ca/cycp-cpcj/is-si/index-eng.htm

3. http://mediasmarts.ca/

4.http://safechild.org/category/articles/internet-social-media-articles/

5.http://www.mcgill.ca/definetheline/

6. http://fbhost.promotw.com/fbpages/img/safety_resources/ffeclg.pdf

7.http://reallifeonline.ca/Grade-4/Part-1--Netiquette.aspx →(grade 4-6):

8.https://www.commonsensemedia.org/educators/digital-citizenship → (Grade K-12)

9. https://www.priv.gc.ca/youth-jeunes/pp/index_e.asp → (Grades 4-12)

10. http://www.netsmartz.org/StudentKit, → (grades 6-12)

(K-12)

Manitoba Education: Safe and Caring Schools

What is the history of the Safe and Caring Schools Strategy in Manitoba?

http://www.edu.gov.mb.ca/k12/safe_schools/history.html

(K-12)

A Continuum Model for Literacy with ICT- Across the Curriculum

http://www.edu.gov.mb.ca/k12/tech/lict/resources/handbook/lict.pdf

(K-12)

Bring Your Own Device Guide

http://www.edu.gov.mb.ca/k12/docs/support/byod/document.pdf

(7-9)

Outcome Chart - Manitoba - Career Development 10: Half Credit

http://mediasmarts.ca/teacher-resources/digital-media-literacy-outcomes-province-territory/manitoba/career-development/outcome-chart-manitoba-career-development-10-half-credit

(4-6)

Outcome Chart - Manitoba - Social Studies 5

http://mediasmarts.ca/curricularoutcomechart/outcome-chart-manitoba-social-studies-5

Ontario

(K-12)

The Ontario Curriculum

- Social Studies and History and Geography- 2013 revised (1-8)

http://www.edu.gov.on.ca/eng/curriculum/elementary/sshg18curr2013.pdf

- Health and Physical Education -2015 revised (1-8)

http://www.edu.gov.on.ca/eng/curriculum/elementary/health1to8.pdf

- The Full-Day Early Learning- Kindergarten Program (1-8)

http://www.edu.gov.on.ca/eng/curriculum/elementary/kindergarten_english_june3.pdf

- The Arts (1-8)

http://www.edu.gov.on.ca/eng/curriculum/elementary/arts18b09curr.pdf

- French as a Second Language (1-8)

http://www.edu.gov.on.ca/eng/curriculum/elementary/fsl18-2013curr.pdf

- Language (1-8)

http://www.edu.gov.on.ca/eng/curriculum/elementary/language18currb.pdf

- Science and Technology (1-8)

http://www.edu.gov.on.ca/eng/curriculum/elementary/scientec18currb.pdf

- Technological Education (9-10)

http://www.edu.gov.on.ca/eng/curriculum/secondary/teched910curr09.pdf

- Technological Education (11-12)

http://www.edu.gov.on.ca/eng/curriculum/secondary/2009teched1112curr.pdf

- Social Science and Humanities (9-12)

http://www.edu.gov.on.ca/eng/curriculum/secondary/ssciences9to122013.pdf

- Science (9-10)

http://www.edu.gov.on.ca/eng/curriculum/secondary/science910_2008.pdf

- Science (11-12)

http://www.edu.gov.on.ca/eng/curriculum/secondary/2009science11_12.pdf

- Health and Physical Education (9-12)

http://www.edu.gov.on.ca/eng/curriculum/secondary/health9to12.pdf

- Guidance and Career Education (9-10)

http://www.edu.gov.on.ca/eng/curriculum/secondary/guidance910currb.pdf

- Guidance and Career Education (11-12)

http://www.edu.gov.on.ca/eng/curriculum/secondary/guidance1112currb.pdf

- French as a Second Language (9-12)

http://www.edu.gov.on.ca/eng/curriculum/secondary/guidance1112currb.pdf

- English as a Second Language and English Literacy Development (9-12)

http://www.edu.gov.on.ca/eng/curriculum/secondary/esl912currb.pdf

- English (9-10)

http://www.edu.gov.on.ca/eng/curriculum/secondary/english910currb.pdf

- English (11-12)

http://www.edu.gov.on.ca/eng/curriculum/secondary/english1112currb.pdf

- Computer Studies (10-12)

http://www.edu.gov.on.ca/eng/curriculum/secondary/computer10to12_2008.pdf

- Canadian and World Studies (9-10)

http://www.edu.gov.on.ca/eng/curriculum/secondary/canworld910curr2013.pdf

- Canadian and World Studies (11-12)

http://www.edu.gov.on.ca/eng/curriculum/secondary/2015cws11and12.pdf

- The Arts (9-10)

http://www.edu.gov.on.ca/eng/curriculum/secondary/arts910curr2010.pdf

-The Arts (11-12)

http://www.edu.gov.on.ca/eng/curriculum/secondary/arts1112curr2010.pdf

(9-10)

Technological Education- The Ontario Curriculum

http://www.edu.gov.on.ca/eng/curriculum/secondary/teched910curr09.pdf

(11-12)

Technological Education- The Ontario Curriculum

http://www.edu.gov.on.ca/eng/curriculum/secondary/2009teched1112curr.pdf

(9-12)

Health and Physical Education- The Ontario Curriculum

http://www.edu.gov.on.ca/eng/curriculum/secondary/health9to12.pdf

(11-12)

Interdisciplinary Studies- The Ontario Curriculum

http://www.edu.gov.on.ca/eng/curriculum/secondary/interdisciplinary1112curr.pdf

(11-12)

English- The Ontario Curriculum

http://www.edu.gov.on.ca/eng/curriculum/secondary/english1112currb.pdf

(10-12)

Computer Studies - The Ontario Curriculum

http://www.edu.gov.on.ca/eng/curriculum/secondary/computer10to12_2008.pdf

(11-12)

Canadian and World Studies- The Ontario Curriculum

http://www.edu.gov.on.ca/eng/curriculum/secondary/2015cws11and12.pdf

(9-10)

Business Studies

http://www.edu.gov.on.ca/eng/curriculum/secondary/business910currb.pdf

(11-12)

Business Studies

http://www.edu.gov.on.ca/eng/curriculum/secondary/business1112currb.pdf

(K-12)

Media Smarts- Referenced by *Caring and Safe Schools in Ontario* Document

http://mediasmarts.com

(4-6)

Ophea- Healthy Schools Healthy Communities- ConnectED

http://teachingtools.ophea.net/lesson-plans/connected

(7-8)

http://teachingtools.ophea.net/lesson-plans/cybercops

Quebec

(7-11)

Quebec Education Program- Secondary Cycle One & Two

http://www1.mels.gouv.qc.ca/sections/programmeFormation/secondaire2/index_en.asp?page=integrateur

1. Cycle 1:

- Cross Curricular Competencies:
http://www1.mels.gouv.qc.ca/sections/programmeFormation/secondaire1/pdf/chapter3.pdf

- Broad Areas of Learning:
http://www1.mels.gouv.qc.ca/sections/programmeFormation/secondaire1/pdf/chapter2.pdf

2. Cycle 2:

- Cross Curricular Competencies:
http://www1.mels.gouv.qc.ca/sections/programmeFormation/secondaire2/medias/en/3_QEP_Chap03.pdf

- Broad Areas of Learning:
http://www1.mels.gouv.qc.ca/sections/programmeFormation/primaire/pdf/educprg2001/educprg2001-030.pdf

(K-12)

Le **RÉCIT**, pour des apprentissages branchés sur le 21e siècle.

http://recit.qc.ca/

(K-12)

Guides pour gerer les aspects juridiques d'Internet et du Web 2.0

http://www.droitsurinternet.ca/versions.php

(K-12)

learn- Digital Citizenship- Internet Safety Resources

http://www.learnquebec.ca/en/content/pedagogy/digicit/isafety.html

(K-12)

educaloi.qc.ca- Privacy and the Internet

https://www.educaloi.qc.ca/en/youth/capsules/privacy-and-internet

(7-11)

Office of the Privacy Commissioner

Youth Presentation Packages (Grades 7-8; 9-12)

https://www.priv.gc.ca/youth-jeunes/pp/4-6_e.asp

https://www.priv.gc.ca/youth-jeunes/pp/9-12_e.asp

Atlantic Provinces

(K-12)

Foundation for the Atlantic Canada Technology Education Curriculum (Nova Scotia, New Brunswick, PEI and Newfoundland and Labrador)

http://www.ed.gov.nl.ca/edu/k12/curriculum/documents/teched/te_found_nf-lab_full.pdf

New Brunswick

(12)

Media Studies Curriculum- Media Studies 120

http://www2.gnb.ca/content/dam/gnb/Departments/ed/pdf/K12/curric/English/MediaStudies120.pdf

(12)

Law 120 Curriculum

http://www2.gnb.ca/content/dam/gnb/Departments/ed/pdf/K12/curric/SocialStudies/Law120.pdf

(K-12)

Cyber Safe Girl

http://www.cybersafegirl.ca/index.php3?number=1044333&lang=E

Nova Scotia

(K-12)

Information and Communication Technology— Essential Learning Outcomes 2015–2016

http://www.ednet.ns.ca/files/curriculum/ITC-P-3ProgressionChart-RevAug26-2015.pdf

(Primary- 9)

Nova Scotia Curriculum Documents

https://sapps.ednet.ns.ca/Cart/items.php?CA=1&UID=MTlNYXIyMDE2MjEyODQ4OTkuMjQyLjEzMC4xNA==

- Primary to 6: http://www.ednet.ns.ca/files/curriculum/P-6LOFs-Oct1-2015.pdf

- 7to 9: http://www.ednet.ns.ca/files/curriculum/LOFs-7-9-Jan7-2014-web.pdf

(K-12)

The Coast- Halifax's Website

http://www.thecoast.ca/halifax/the-colossal-failure-of-nova-scotias-cyber-safety-act/Content?oid=5099688

(K-12)

Educhatter's Blog- Lively Commentary on Canadian Education

https://educhatter.wordpress.com/tag/student-privacy-issues/

(K-12)

MAPPING DIGITAL LITERACY POLICY AND PRACTICE IN THE CANADIAN EDUCATION LANDSCAPE

http://mediasmarts.ca/sites/mediasmarts/files/publication-report/full/mapping-digital-literacy.pdf

Foundation for the Atlantic Canada Technology Education Curriculum (Nova Scotia, New Brunswick, PEI and Newfoundland and Labrador)

http://www.ed.gov.nl.ca/edu/k12/curriculum/documents/teched/te_found_nf-lab_full.pdf

(K-12)

Global Resources and Information Directory- Nova Scotia

http://www.fosigrid.org/canada/nova-scotia

1. New Brunswick, Canada: Education and Early Childhood Development: http://www.gnb.ca/0000/publications/curric/techedfound.pdf
2. Media Smarts: Web Awareness Workshop Series: https://www.ece.gov.nt.ca/files/Early-Childhood/mediasmarts/WebAwareness%20WORKSHOPS%20Series.pdf

PEI

(K-12)

Prince Edward Island Department of Education, Early Learning and Culture: Curriculum Guides by Subject

http://www.gov.pe.ca/eecd/index.php3?number=1051663&lang=E

1. Communication and Information Technology (Grades 1-9)

http://www.gov.pe.ca/eecd/index.php3?number=1051675&lang=E

2. Technology Course Guides (Grades 10-12)

http://www.gov.pe.ca/eecd/index.php3?number=1026871&lang=E

(K-12)

Foundation for the Atlantic Canada Technology Education Curriculum (Nova Scotia, New Brunswick, PEI and Newfoundland and Labrador)

http://www.ed.gov.nl.ca/edu/k12/curriculum/documents/teched/te_found_nf-lab_full.pdf

(K-12)

PEI Kids- Internet Safety Tips

http://www.peikids.org/what-you-need-to-know/parentscaregivers/internet-safety-tips/

(K-12)

PEI Education and Early Childhood Development: Technology in Education- Internet Safety

http://www.edu.pe.ca/journeyon/profdev/internetsafety.html

Newfoundland

(K-12)

Foundation for the Atlantic Canada Technology Education Curriculum (Nova Scotia, New Brunswick, PEI and Newfoundland and Labrador)

http://www.ed.gov.nl.ca/edu/k12/curriculum/documents/teched/te_found_nf-lab_full.pdf

(K-12)

Department of Education and Early Childhood Development- Safe and Caring Schools

http://www.ed.gov.nl.ca/edu/k12/safeandcaring/index.html

(K-12)

Newfoundland and Labrador English School District- Internet and Social Media Safety

https://www.nlesd.ca/public/internetsafety.jsp

Northwest Territories

(K-12)

Literacy with ICT Across the Curriculum: Guide to Infusion (2012)

https://www.ece.gov.nt.ca/files/Early-Childhood/LwICT%20INFUSION%20GUIDE%20-%202012.pdf

(K-12)

Northwest Territories- Education, Culture and Employment: LITERACY WITH INFORMATION AND COMMUNICATION TECHNOLOGY (LWICT)

https://www.ece.gov.nt.ca/early-childhood-and-school-services/school-services/curriculum-k-12/literacy-information-and

(K-12)

Media Smarts

www. mediasmarts.ca

Nunavut

(K-12)

http://www.gov.nu.ca/sites/default/files/nu_cur_guide_2015-2016_final.pdf

Appendix B: Where and How Does the *Personal Data Protection Competency* (PDPC) Framework Fit in Canadian Educational Resources?

Where and How Does the *Personal Data Protection Competency* (PDPC) Framework Fit in Canadian Educational Resources?

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Contents

Personal Data Protection Competency (PDPC) Mapping

A key result of the October 2016 International Conference of Privacy and Data Protection Commissioners was the preparation of a *Personal Data Protection Competence (PDPC) Framework for School* students. In this report, we map and review existing educational resources available from provincial and territorial education ministries and school jurisdictions and from key Canadian stakeholder digital education groups to determine whether there are adequate resources available in Canada to address the competencies identified in the PDPC framework. The purpose of the review was to establish whether and to what degree the PDPC competencies were addressed in formal and informal Canadian educational contexts and establish a list of best practices for inclusion of the competencies. An important second purpose was to identify gaps; whether in certain age groups, competencies, or regions; where programming can be improved in order to address the competencies and help Canadian students learn to protect their personal data, navigate the Internet safely, and become good digital citizens.

Statistics Canada census data (2010) showed that 91.1% of households with minor children have access to the Internet. This number has shown steady growth and continues to increase each year. In relation to other communications technologies at various times in history, this figure of over 90% represents an almost complete saturation of the Canadian public. There are few filters in place that ensure young children and youth are protected from the volatile digital public sphere and the many hazards that exist in this largely unregulated parallel world. Privacy concerns encompass the unconscious and usually involuntary participation in the aggregating logics of big data but also multiple contextual data breaches which may expose children and young people to mischief, harassment, or even physical danger. In response, the best strategy is education that empowers children and young people to make healthy and pro-social choices. Just like the ParticipACTION initiatives of the 1970s to the present alerted the Canadian public in general, and children and youth in particular, to the physical activity needs, a broad public response is needed now to ensure children know how to interact with the Internet in a safe and rewarding manner. And, as children access digital devices at ever younger ages and begin to live lives with one foot in the virtual world and another in the social world, the PDPC competencies have become increasingly relevant as children navigate digital spaces that pose potentially significant risk to themselves, their physical safety, and their emotional well-being. The key, ultimately, is educational opportunities that expose children and young people to the know-how and life skills they need to make smart choices and take care of themselves in their digital lives.

Methodology for the Review

A comprehensive list of curriculum documents and other program documents was developed by searching the websites for each Ministry of Education in Canada. Provincial and territorial curricula were grouped into primary (grades K-4), junior (grades 5-8), and secondary (grades 9-12), although these definitions and distinctions differ across jurisdictions. Some provinces had dedicated Information and Communication Technology (ICT), Technology Education, Media Literacy, or similar curricula, although these tended to be more in the secondary grades. For the younger grades and for provinces or territories where distinct ICT, media, or digital literacy curricula were not found, a key word search for terms such as technology, media, privacy, and digital citizenship was undertaken through all curricula to ascertain whether relevant concepts were integrated throughout other curricular areas. It also became apparent that some provincial and territorial Ministries of Education were using or were recommending the use of certain third-party programs. A list of twelve key Non-Formal or Third-Party programs was also compiled. Some of these were available in English or French only, though most Canadian sites contained parallel English and French texts.

The PDPC framework and criteria were printed and key words or concepts for each competency were identified. There is significant overlap between competencies. Competencies 1, 2, 4, 5, 6, 7, and 8 address different aspects of personal data collection and use including identification of what personal data is, legal rights regarding information use, understanding how data is being used when accessing online services, and learning strategies to protect online data and privacy. Competency 3 addresses the skills required for navigating online and Competency 9 addresses digital citizenship. Table 1 presents our coding system and corresponding PDPC knowledge and skill outcomes used in the review. The first digit in the code corresponds to the PDPC competency (1-9). The second digit indicates whether the statement corresponds to the Purpose statement for the competency (P), to the Knowledge outcomes (K), or to the Skill outcomes (S). The third digit was assigned based on the sequence listed in the PDPC document (pages 7-15). In assessing provincial and territorial curriculum documents, each curricular objective gathered from our search of the curriculum documents was assigned codes based on Table 1. In some cases, PDPC competencies or descriptors were not directly discussed in an curricular objective but could be included, such as in a discussion about laws. In these cases, the code was assigned if the PDPC knowledge or skills could reasonably be made to fit under the existing objective. Codes for objectives were then condensed to give overall codes for each competency and grade. Results of the coding process are presented as Appendix A: *PDPC Alignment with School Curriculum by Region*. Appendix C provides a fuller listing for each competency with examples of text from curriculum documents.

Table 1. ***Codes Assigned for Knowledge and Skill Outcomes for Each Competency***

Code	PDPC Knowledge or Skill Outcomes from the ICPDPC Document
	[1/9] Personal data
1.P	Purpose: Understanding the concept of personal data is essential. The notions of pseudonymity and masking one's identity and metadata are also explained. The student is also taught that certain personal data can be considered particularly sensitive, because of the intimate nature of private life and/or the data could be the source of possible discrimination or they refer to minors. Finally, understanding the terms of data collection and processing is necessary to understand the concept of personal data.
1.K1	I understand what is involved in the concept of personal data, defined as any data—whether or not it was made public—about an identifiable individual;
1.K2	I know and understand the concept of pseudonymity and masking one's identity;
1.K3	I know that, depending on how it is processed, data may allow the identification of individuals;
1.K4	I know some technical data can assist in the identification of individuals; that scanned documents and images have embedded metadata that describe their contents and that online activity may leave traces (cookies, browsing history, etc.) which can contain personal data;
1.K5	I know that there are data which can be considered as particularly sensitive, according to countries, and which, for example, contain information regarding minors, people's origins, political and/or religious opinions or affiliations, biometric or genetic profile, health and/or sex lives.
1.S1	I can give examples of personal data that can directly identify individuals (civil status, photo of a student in the class, etc.) and technical data that can monitor the activities of a person and identify them (cookies, geolocation data, etc.);
1.S2	I can give examples of sensitive personal data (e.g., health, genetic profile, sex lives…).
	[2/9] Privacy, civil liberties and protection of personal data
2.P	Purpose: The right to the protection of personal data is founded in human rights, civil liberties, democratic values and citizenship. It is also an important guarantee of respect for privacy.
2.K1	I know what human rights and civil liberties are and can recite them;
2.K2	I know these principles and democratic values are exercised as much in the real world as in the virtual world;
2.K3	I understand the concept of privacy, the right to privacy, and the need to have them recognized and protected;
2.K4	I understand how my actions may affect the privacy of others;
2.K5	I understand how the protection of privacy is not just about everyone's private life, but can also be applied in the public space, particularly on the Internet;
2.S1	I can give examples of situations pertaining to private life (e.g., medical consultations, parental separation);

Code	PDPC Knowledge or Skill Outcomes from the ICPDPC Document
2.S2	I evaluate what information I can and cannot disclose about myself and others (e.g., my home address, illness of a relative, etc.);
2.S3	I can give examples of situations in which digital media use has enhanced the expression of civil liberties and/or, *on the contrary*, curtailed them.
	[3/9] Understanding the digital environment – technical aspects
3.P	Purpose: To protect his/her privacy, the student must understand the digital environment and must be able to navigate it independently. To do so, it is necessary to understand the hardware and technical infrastructure of information systems that support deployment.
3.K1	I know the difference between hardware, software and applications; I understand how software and hardware components make up computer systems;
3.K2	I know what the Internet and its services are (social networks, mobile applications, the cloud, etc.);
3.K3	I understand how digital space is structured (physical networks, browser, IP addresses and URLs, search engines, etc.);
3.K4	I am aware of the concept of information architecture, and the collection, structure and processing of information;
3.K5	I know the key IT risks; I know what digital security includes and understand the need to ensure the physical and logical security of a digital environment
3.S1	I assess my practices and develop problem-solving and learning reflexes— namely about security— by identifying resources (user communities and forums, tutorials, etc.);
3.S2	I can identify malfunctions and solve simple problems by following established procedures; if necessary, I know how to actively seek solutions online, particularly when it comes to ensuring the security of my digital environment.
	[4/9] Understanding the digital environment - economic aspects
4.P	Purpose: Understanding the digital environment and navigating it independently require understanding it as an ecosystem and understanding its underlying logic; this involves knowledge and competencies: the economics and value of personal data, key players and services, and economic models.
4.K1	I know who the key players in the digital economy are (e.g., ISPs, service providers, developers, curators, etc.);
4.K2	I understand the systems used to market products and offer free services (loyalty cards, targeted advertising via cookies, setting up user accounts, subscribing to newsletters, etc.), for the purpose of establishing personalized user profiles;
4.K3	I understand that the majority of such offers of services entail collecting and using personal data as well as storing this information in a database;
4.K4	I know what data are collected and stored when I use the Internet, a social network or a service.

Code	PDPC Knowledge or Skill Outcomes from the ICPDPC Document
4.S1	I can give examples of the types of technical data likely to be collected when I am online (e.g., browser type, contacts list, geolocation data, private messages, etc.).
4.S2	On any given website, I can find the terms and conditions of use of my personal data (Terms and Conditions of Use, legal information, privacy policy, etc.).
4.S3	I can give examples of digital services whose economic model involves—or does not involve—the collection of personal data.
	[5/9] Understanding personal data regulations and legislation
5.P	Purpose: Knowledge of data protection systems and institutions is covered in this competency principle: regulation principles, applicable legal texts, Data Protection Authorities (DPAs). The student understands that in a number of countries, personal data is protected by laws and regulations, which means that individuals or organisations are not free to use it as they please.
5.K1	I know that personal data cannot be used for just any purpose and that regulations exist;
5.K2a-e	I know and understand the key rules relative to data protection: a) Personal data is processed or used for specific purposes and must be relevant to or consistent with the activity in question (e.g. finality, proportionality); b) Some particularly sensitive data can be, in certain countries, be regulated in a specific way (e.g. data from minors, people's origin); c) Personal data should not be retained for longer than is necessary and must then be archived or deleted (retention period) when appropriate according to countries' Privacy laws; d) People have rights regarding their personal data (e.g. access, correction, refusal, consent); e) Personal data is collected and processed or used under conditions that ensure privacy;
5.K3	I know that public and private organizations that collect and process or use personal data must comply with these rules and that violations can lead to sanctions, according to countries;
5.K4	I know of the existence, role and powers of Data Protection Authorities;
5.K5	I know that people about whom personal data is collected must be informed on their rights and of the use to which their data will be put and to whom it may be shared.
5.S1	I can give examples of digital practices that I think comply with and/or violate data protection regulations;
5.S2	I can name the Data Protection Authority in my country (of my area) or give an example of a Data Protection Authority, and I can cite examples of actions or decisions made by the authority;
5.S3	If a Data Protection Authority exists in my country, I can contact it for information and advice.
	[6/9] Understanding personal data regulations: Controlling the use of personal information
6.P	Purpose: The student is taught that the controlled use of his/her personal data is both necessary and legitimate, based on the context in which it is used in daily life (as a student, team member, member of a family, etc.). The way that the student identifies him/herself and/or makes him/herself known to others in the digital world can vary depending on the situation and lead them to reveal more or less information about themselves. This is learning to manage one's "digital identities." Students are also introduced to the fact that they have rights and duties, particularly towards others

Code	PDPC Knowledge or Skill Outcomes from the ICPDPC Document
6.K1	I understand the need and purpose of providing or not providing personal information, depending on the context and the end use of the information;
6.K2	To this end, I know how to set up and use pseudonyms and more than one email address, account and/or profile depending on how I intend to use them.
6.K3	I know that it is necessary to regularly monitor what is said about me online (my e-reputation);
6.K4	I know that posting involves responsibility on my part and that of my parents / legal guardians.
6.S1	I am careful to only share the personal data that is absolutely necessary to register for a service;
6.S2	I can express myself online while taking into account the nature of the space in which I am posting (private, public, related to school, family, friends, etc.);
6.S3	I am vigilant about what I publish online, even under a pseudonym;
6.S4	I can participate in an online debate with respect for others: I do not share information and photos of third parties without their knowledge and that can harm their privacy or reputation;
6.S5	I use tools to regularly monitor content and information about me that is seen by others on social networks.
	[7/9] Managing my data: Learning to exercise my rights
7.P	Purpose: Here we learn about the range of actions available to me as a child/teenager when it comes to consenting to or refusing the collection of my personal data, alerting, reporting and protecting myself— through intervention by a responsible adult, when appropriate (*)—to deal with situations experienced and/or identified as breaching the privacy and/or the integrity of persons, or which constitute a violation of the law. (*) By introducing the concept of intervention by a responsible adult and/or legal guardian, the authors take into consideration the specifics of national legislation, services offered, age group, child's level of autonomy and identified practices.
7.K1	I know that, to use certain online services, the consent of myself or my parents/legal guardians is required;
7.K2	I know that I have rights regarding my personal data (e.g. access, correction, refusal, consent, delisting, erasure) and that I can exercise these rights or have them exercised on my behalf by contacting the service in question according to domestic procedures and, in the event of a refusal or any problems, by contacting the Data Protection Authority if it exists, a judge, according to countries and/or the relevant national/sub-national authorities, or advocacy groups.
7.S1	I can update or request updates to data concerning me which appears to be outdated, inaccurate or incomplete, if necessary.
7.S2	I can request the deletion of my personal data online;
7.S3	I am able to check with the service in question whether or not personal data have been collected and stored in a database. If necessary, I can obtain this information from the service in question and exercise - or have exercised on my behalf - my other rights regarding said service;
7.S4	I am able to unsubscribe from a service and/or delete an account that I have created.

Code	PDPC Knowledge or Skill Outcomes from the ICPDPC Document
	[8/9] Managing my data: Learning to protect myself online
8.P	Purpose: This competency principle covers the solutions used to ensure the technical protection and security of personal data. These solutions are the subject of learning processes experienced within the collective framework of school and school-related environments. Students must know how to use technical devices to identify and authenticate themselves online, authorize - or not - the collection of personal data, and set up an account and/or profile in accordance with data protection rules.
8.K1	I know that there are ways to protect myself online: in particular, I am familiar with the different ways to identify and authenticate myself; I am aware of data encryption solutions;
8.K2	I understand the terms and conditions of use relative to online services (allow or refuse geolocation, allow or refuse applications access to my contacts, photos, etc.);
8.K3	I know that I can manage the settings of the online applications and services that I use.
8.S1	I use procedures available to protect my personal data: for my accounts and profiles I can create strong passwords, or passphrases, and change them regularly; I can examine documents and images that I share online and if necessary, I can use tools to delete metadata; and data encryption solutions;
8.S2	I can manage the security and privacy settings of the accounts, profiles and devices that I use; I regularly check these settings and adjust them.
	[9/9] The digital world: Becoming a digital citizen
9.P	Purpose: Students are to develop a critical and ethical approach to navigate the digital environment with confidence and clarity and act accordingly. Exercising their rights, using digital services while respecting the protection of personal data, identifying service offerings that may affect privacy or freedoms, reporting, and mobilizing: all actions which define a digital citizen, responsible for their own data and respectful of the data of others.
9.K1	I can compare information and assess whether or not it is reliable;
9.K2	I can analyze and critically assess a situation related to the use of digital media (e.g., the spread of false information and/or rumours);
9.K3	I can identify inappropriate or illegal content and behaviour;
9.K4	I can recognize situations involving reputational damage or cyber-bullying.
9.S1	In the situations described above, I can, directly or through an adult, notify the relevant authorities and/or advocacy associations;
9.S2	I am able to foster positive outcomes (complaints likely to influence major Internet players, mediation to ensure that inappropriate behaviour stops, development of codes of conduct, etc.);
9.S3	I am able to judge whether it is appropriate to publish such information in a given context; I can analyze and foresee the potential consequences of sharing it online.

Our method for non-curricular, third-party programs was to assign a letter grade for each competency based on how many of these key knowledge and skill descriptors were addressed and how thoroughly they were addressed. Third-party programs target specific skills and strategies related to their area of focus, unlike provincial curricula which might include PDPC competencies within a much wider framework. Table 2, below, provides the key knowledge and skill descriptors used in the analysis. **A grade of A was assigned if the resource thoroughly addressed the competency and all or almost all the descriptors were included. B was assigned when at least half the descriptors were addressed; C when fewer than half were addressed; and D when the descriptors received very little coverage.** Letter-grade results assigned for each competency are included as Appendix B: *PDPC Alignment with Non-Formal or Third-Party Programs*. Appendix D provides select examples of text from various third-party programs that illustrate the key focus of the resource and how the PDPC competency was addressed. An exhaustive list would be prohibitive, although we have attempted to showcase the key area of focus for each program.

Table 2. ***Key Knowledge and Skill Outcomes for Each Competency***

	Key Knowledge Descriptors	Key Skill Descriptors
Competency 1: Personal data	- What is personal data - Pseudonymity / masking identity - Data allows identification of individuals - Sensitive data, minors, origins, opinions, affiliations, other identifiers	- Give examples of personal data - Give examples of technical data - Give examples of sensitive personal data
Competency 2: Privacy, civil liberties and protection of personal data	- Human rights and civil liberties - Democratic values in real and virtual worlds - Concept of privacy, right to privacy - My actions affect others' privacy	- Give examples pertaining to private life - Evaluate what I can and cannot disclose - Situations where digital media enhanced or curtailed civil liberties
Competency 3: Understanding the digital environment – technical aspects	- Hardware, software, and how they make up computer systems - What Internet and its services are - How digital space is structured, architecture, collection, structure, processing of data - IT risks and digital security	- Problem-solving and learning reflexes - Identify malfunctions and solve simple problems
Competency 4: Understanding the digital	- Key players in digital economy - Marketing of products, cookies, etc. - Collecting and using personal data	- Give examples of data stored - Find terms and conditions for use of personal data

environment - economic aspects	- What data are collected and stored when using Internet	- Examples of digital services whose economic model involves collection of personal data
Competency 5: Understanding personal data regulations and legislation	- Personal data cannot be used for just any purpose - Key rules – data not retained for longer than necessary, archived, deleted; rights regarding data; data have conditions for use - Public and private organizations must comply - Data protection authorities - Must be informed when my data is used	- Give examples of practices that comply and violate - Name the Data Protection Authority in my area - Can contact Data Protection Authority
Competency 6: Understanding personal data regulations: Controlling the use of personal information	- Need and purpose of providing/ not providing personal data - Can establish pseudonyms and more than one email address - Monitor e-reputation - Post responsibly	- Share only data absolutely necessary - Express self online understanding nature of space to which I am posting - Monitor what I publish online - Participate in online debate respectfully
Competency 7: Managing my data: Learning to exercise my rights	- Some sites require consent of self and legal guardian - Rights regarding personal data (access, correction, refusal, consent, delisting, erasure)	- Can update personal data - Can request deletion of personal data - Can check whether personal data have been collected and stored - Can unsubscribe/delete accounts
Competency 8: Managing my data: Learning to protect myself online	- Understand how to protect self online - Understand terms and conditions - Manage settings of online services	- Can protect personal data (passwords, change frequently, delete metadata, encryption) - Manage security and privacy settings, check and adjust regularly
Competency 9: The digital world: Becoming a digital citizen	- Establish whether online information is reliable - Critically analyze and assess information - Identify inappropriate or illegal content - Recognize cyberbullying	- Notify relevant authorities or advocacy associations - Foster positive outcomes online - Judge whether it is appropriate to publish information, consequences

Findings and Analytical Comments

Coverage of PDPC by Provincial and Territorial Curricula

Provincial and territorial curricula addressing ICT, media, or digital literacy were authored over a number of years. Some, such as Alberta's program, have not been updated in over 15 years. Others are from the mid 2000s (Prince Edward Island, Nova Scotia, and Manitoba) and several have been updated within the past five years (British Columbia, Northwest Territories, Ontario, Québec, New Brunswick, and Newfoundland and Labrador). Earlier programs tend to address the competencies in the later grades (such as grade 7 or 10) and have much less complete coverage of the competencies. This finding makes sense because the use of digital devices and the Internet has changed in recent years with the more universal availability of the Internet and connected devices such as smart phones and tablets. Not all competencies tend to be addressed in a single curriculum document or at a single grade although Nova Scotia's (2005) curriculum does address most competencies as young as grade 4. The more recent curricula do tend to address more competencies and earlier; however, not systematically. The Northwest Territories (2012) framework addresses parts of Competencies 3, 4, and 9 as early as Kindergarten. Newfoundland and Labrador's document (2013) has some focus on digital citizenship (Competency 9), protection of personal privacy (Competency 2), and technical aspects of computers (Competency 3), which extends to the early grades as well. The one exception appears to be New Brunswick (2014) which addresses only grade 12 and is structured as objectives that should be achieved by the end of grade 12, without providing specific guidance for teachers as to when to introduce instruction for the various curricular outcomes. Although it may not be as apparent from the codes assigned (Appendix A), the broadest coverage of the competencies by a provincial ministry appears to be in British Columbia's new curricula. Cumulatively, almost all the competencies are addressed at least once with several of the Knowledge and Skill outcomes being addressed, though not always in the same grade. This is an important finding because it means that at least half the PDPC criteria for each competency are being addressed in the BC curriculum and in a wide variety of grades.

The analysis of provincial and territorial curricula and policy documents points to significant gaps in some regions of the country and a focus on knowledge outcomes with little emphasis on teaching or demonstrating skills objectives. When it was released in 2000, Alberta's curriculum was cutting edge; yet, it has not been updated since. Likewise, the earlier curriculum documents do not address all the PDPC Competencies. This deficit is problematic because it suggests that students are not being adequately prepared for online data protection and digital citizenship in the present context. Even newer curricula do not address all competencies equally and do favour the knowledge objectives but may touch lightly on skill objectives.

Coverage of PDPC by Non-Formal or Third-Party Resources

Non-formal, third-party resources and programs have been developed which address some of the areas of need but tend to have very specific areas of focus. Of these, *Media Smarts* (English and French), *Wired Safety* (English), and the two French resources (Éducaloi, 2018; Trudel & Abran, 2012) have the best coverage of the PDPC Competencies. Unfortunately, most sites appear to target too broad a range of students, parents, and teachers from Kindergarten to grade 12, regardless of the ways in which various groups access the Internet and their online activities. That said, *Media Smarts* does have targeted resources for different age groups, and their lesson plans and activities may be more (teacher) user-friendly because they are tied to various Canadian curricula. Online resources can help fill gaps in provincial and territorial curricula; however, they are developed by a variety of non-profit agencies, often in partnership with the federal and some provincial governments. In practice, this limits their uptake by teachers who are already juggling many balls in the air with the multiple mandated curriculum requirements under their provincial and territorial mandates. The strength of third party resources and programs, however, is their nimbleness to respond to curriculum needs that arise either based on outside events or new curricular trends from other jurisdictions. In short, although Ministries of Education tend to act like tankers that need time and distance to make a turn, third party organizations are more like the nimble tugboats that can more quickly react.

Conclusions and Recommendations

The balance of this report includes the list of resources that have been reviewed; the codes or ratings organized by jurisdiction and grade levels; and then the detailed exemplars which demonstrate what is expected to be taught. It is clear from our review of provincial and territorial curriculum documents and non-formal, third-party resources that there are significant gaps in coverage in both the breadth and depth of coverage of the *Personal Data Protection Competency* (PDPC) knowledge and skills descriptors. This is further exacerbated by the rapidness of technological change, where new media technologies, platforms, and software can come out overnight, quickly changing the rules of engagement. For example, the use and ubiquity of mobile devices has changed significantly, even over the past five years, and students of all ages must develop appropriate knowledge and skills to protect the privacy of their personal data and become good digital citizens. Many curriculum documents pre-date recent changes, or were developed mid-stream, such as a profoundly increased access to the Internet thanks to mobile technologies and enriched broadband access; greater social media use by teens and pre-teens (even in contravention of the terms of service for some sites); and the continued prevalence of cyberbullying and other predatory behaviours. Of particular concern, the proactive skills of exercising rights to personal data (Competency 7) and protecting self online (Competency 8) received the least coverage. Other documents, developed by third-party groups, have been a bit more responsive to the various gaps or issues their developers have identified, but these do not address the full PDPC framework in most cases and are not age-specific.

In order to teach the necessary knowledge and skills for Canadian students to protect their online identities and data and to be good digital citizens, **provincial and territorial curricula require thorough updates**. The development of a Canadian digital privacy curriculum framework based on the PDPC with the input of educators and experts in digital security, such as the key non-government stakeholders, would provide guidance and ensure that the best-practices inform the curriculum revision process. A strength of the third-party sites is that they provide information and scenarios to teach about privacy and digital citizenship or address the specific laws that govern online privacy and privacy rights in Canada – information that may not be available or familiar to Canadian educators. Technology use by students in Canadian schools is constantly changing and sometimes students have more knowledge of technological platforms than their parents or teachers. **The inclusion of age-appropriate, specific examples and information to support educators would be a beneficial addition to a digital privacy curriculum framework document.** To ensure this outcome, **including some middle school and high school students in the preliminary stages of new curriculum design would be sensible.** Not only would the young people be able to pinpoint some areas of concern that adult educators may not spot, but they could also provide invaluable advice on curriculum design that will be impactful to people of their age demographic.

Assessing privacy curriculum supports in Canadian provincial and territorial curricula and in third-party materials in 2018 is, not surprisingly, a frustrating exercise. Digital technologies, platforms, and software are quite new, from a historical standpoint, and they are an elusive target for curriculum reform because they change so dramatically and frequently. We have clearly stated that the curriculum across the country needs updating, but educational jurisdictions will likely react based on multiple contending concerns and there are more pressing concerns in the educational establishment such as dips in Math scores or literacy levels on provincially mandated exams. Our recommendation is to involve children in the process, whatever that might be; whether in developing new curriculum or a broad based public awareness campaign. In regards to the latter, we have already mentioned ParticipACTION which was a public awareness campaign that emerged from outside the school sector but was rapidly adopted there. We note, too, that the non-profit Roots of Empathy initiative was a terrific national success in terms of accessing schools to provide powerful, pro-social socialization. If there is an urgency to spreading the work of the Privacy Commissioner of Canada, waiting on multi-jurisdictional curriculum change may not be the quickest road to travel, but rather a campaign of national significance might be a good short to medium tactic. This may involve partnering with other third-party groups, such as *Media Smarts*, as well as the formal education system. It would be advisable to organize some activities around the annual Media Literacy week, organized in Canada by *Media Smarts* and internationally by the UNESCO Media and Information Literacy (MIL) initiative.

Documents Analyzed for This Review

Provincial and Territorial Curricula and Policy Documents

English Language Resources and Links

Alberta Education. (2000). *Programs of Study: Information and communication technology*. Edmonton, AB: Author. Retrieved from: https://education.alberta.ca/media/3114953/ictpos.pdf

British Columbia Ministry of Education. (2016). *BC's digital literacy framework*. Vancouver, BC: Author. Retrieved from https://www2.gov.bc.ca/assets/gov/education/kindergarten-to-grade-12/teach/teaching-tools/digital-literacy-framework.pdf

British Columbia Ministry of Education. (2016). *BC's new curriculum*. Vancouver, BC: Author. Retrieved from https://curriculum.gov.bc.ca/curriculum.

Links to specific parts of the curriculum addressed:

- Applied Design, Skills, and Technologies Curriculum (PDF Version)
  - https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/curriculum/adst/en_adst_k-9.pdf
- Applied Design, Skills, and Technologies Curriculum (Web Versions)
  - https://curriculum.gov.bc.ca/curriculum/adst/6
  - https://curriculum.gov.bc.ca/curriculum/adst/7
  - https://curriculum.gov.bc.ca/curriculum/adst/8

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Links to specific parts of the curriculum addressed:

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- Applied Design, Skills, and Technologies Curriculum - Drafting 10
  - https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/10-12/adst/en_adst_10_drf_elab.pdf
- Applied Design, Skills, and Technologies Curriculum – Electronics and Robotics 10
  - https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/10-12/adst/en_adst_10_ear_elab.pdf
- Applied Design, Skills, and Technologies Curriculum - Web Development 10
  - https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/10-12/adst/en_adst_10_web_elab.pdf

- Applied Design, Skills, and Technologies Curriculum – Computer Information Systems 11
  - https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/10-12/adst/en_adst_11_cis_elab.pdf
- Applied Design, Skills, and Technologies Curriculum – Computer Programming 11
  - https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/10-12/adst/en_adst_11_prg_elab.pdf
- Applied Design, Skills, and Technologies Curriculum - Digital Communications 11
  - https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/10-12/adst/en_adst_11_dco_elab.pdf
- Applied Design, Skills, and Technologies Curriculum - Drafting 11
  - https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/10-12/adst/en_adst_11_drf_elab.pdf
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  - https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/10-12/adst/en_adst_12_cfm_elab.pdf
- Applied Design, Skills, and Technologies Curriculum – Computer Information Systems 12
  - https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/10-12/adst/en_adst_12_cis_elab.pdf
- Applied Design, Skills, and Technologies Curriculum – Computer Programming 12
  - https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/10-12/adst/en_adst_12_prg_elab.pdf
- Applied Design, Skills, and Technologies Curriculum – Digital Media Development 12
  - https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/10-12/adst/en_adst_12_dmd_elab.pdf
- Applied Design, Skills, and Technologies Curriculum – Drafting 12
  - https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/10-12/adst/en_adst_12_drf_elab.pdf
- Applied Design, Skills, and Technologies Curriculum – Media Design 12
  - https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/10-12/adst/en_adst_12_med_elab.pdf
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  - https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/10-12/social-studies/en_ss_12_law_elab.pdf

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Appendix A: PDPC Alignment with School Curricula by Region

In this appendix, we provide the results of our mapping of the relevant provincial and territorial curricula for alignment with the PDPC competencies: Competency 1 *Personal Data*; Competency 2 *Privacy, civil liberties, and protection of personal data*; Competency 3 *Understanding the digital environment – technical aspects*; Competency 4 *Understanding the digital environment – economic aspects*; Competency 5 *Understanding personal data regulations and legislation*; Competency 6 *Understanding personal data regulations: Controlling the use of personal information*; Competency 7 *Managing my data: Learning to exercise my rights*, Competency 8 *Managing my data: Learning to protect myself online*; and Competency 9 *The digital world: Becoming a digital citizen*.

Results are presented by region – Western, Central, and Eastern and by grade. Many of the provincial and territorial curricula also contained an overall framework for Information and Communication Technology (ICT) or digital literacy.

Each relevant curricular objective gathered from our search of curriculum documents was assigned codes based on the following coding strategy:

- PDPC competency number (1-9)
- Purpose (P), Knowledge outcome (K), Skill outcome (S)
- Objective number, in sequence

Codes for objectives were condensed to give overall codes for each competency and grade.

Western Canadian Provinces and Territories[1]

		PDPC Competencies								
		1	2	3	4	5	6	7	8	9
Alberta[2] (2000)	K	-	-	-	-	-	-	-	-	-
	1	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	9.P, 9.S2, 9.S3
	5	-	-	-	-	-	-	-	-	9.P, 9.S2, 9.S3
	6	-	-	-	-	-	-	-	-	9.P, 9.S2, 9.S3
	7	-	2.P	-	4.P	5.P, 5.K2a, 5.K2c 5.K2d, 5.K2e	6.K4, 6.S4	-	-	9.P, 9.K2, 9.S2
	8	-	2.P	-	4.P	5.P, 5.K2a, 5.K2c 5.K2d, 5.K2e	6.K4, 6.S4	-	-	9.P, 9.K2, 9.S2
	9	-	2.P	-	4.P	5.P, 5.K2a, 5.K2c 5.K2d, 5.K2e	6.K4, 6.S4	-	-	9.P, 9.K2, 9.S2
	10	-	2.P, 2.K3, 2.K4, 2.K5	-	4.P, 4.K1, 4.K2, 4.K3, 4.K4	5.P	-	-	-	-
	11	-	2.P, 2.K3, 2.K4, 2.K5	-	4.P, 4.K1, 4.K2, 4.K3, 4.K4	5.P	-	-	-	-

		PDPC Competencies								
		1	2	3	4	5	6	7	8	9
	12	-	2.P, 2.K3, 2.K4, 2.K5	-	4.P, 4.K1, 4.K2, 4.K3, 4.K4	5.P	-	-	-	-
British Columbia[3] (2016)	K	-	-	-	-	-	-	-	-	-
	1	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-
	5	-	-	-	-	-	-	-	-	-
	6	1.P 1.K1 1.K3 1.K4	2.P, 2.K3, 2.K4, 2.K5	3.K5	4.P, 4.K3, 4.K4	-	6.P, 6.K3, 6.K4	-	8.K1	9.P, 9.K2, 9.K3, 9.K4, 9.S2, 9.S3
	7	1.P 1.K1 1.K3 1.K4	2.P, 2.K3, 2.K4, 2.K5	3.K5	4.P, 4.K3, 4.K4	-	6.P, 6.K3, 6.K4	-	8.K1	9.P, 9.K2, 9.K3, 9.K4, 9.S2, 9.S3
	8	1.P, 1.K3, 1.K4	2.P, 2.K3, 2.K4	3.K2	4.P	-	6.P, 6.K3, 6.K4, 6.S1, 6.S2, 6.S4	-	-	9.P, 9.K2, 9.K3, 9.S3
	9	-	-	-	-	-	-	-	-	-
	10	1.P, 1.K3, 1.K4, 1.K5	2.P, 2.K3, 2.K4, 2.K5	3.P, 3.K1, 3.K2, 3.K4, 3.K5, 3.S1, 3.S2	4.P 4.K2	5.P, 5.K3	6.P	-	8.P, 8.K1	9.P, 9.K2, 9.K3, 9.S3

		PDPC Competencies								
		1	2	3	4	5	6	7	8	9
	11	1.P, 1.K3, 1.K4	-	3.P, 3.K1, 3.K2, 3.K3, 3.K4, 3.K5, 3.S1, 3.S2	4.P, 4.K3	5.P, 5.K3	6.P, 6.K4, 6.S4	-	8.P	9.P, 9.K1
	12		2.P, 2.K3, 2.K4,	3.P, 3.K1, 3.K2, 3.K3, 3.K4	4.P	5.P, 5.K1, 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.K3, 5.K4, 5.S1, 5.S2	-	-	-	9.P, 9.K2, 9.K3
Manitoba[4] (2007)	K	-	-	-	-	-	-	-	-	-
	1	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-
	4	1.P, 1.K4	-	3.K2, 3.K3	-	-	-	-	-	9.P, 9.K1, 9.K2, 9.S2
	5	1.P, 1.K4	-	3.K2, 3.K3	-	-	-	-	-	9.P, 9.K1, 9.K2, 9.S2
	6	1.P, 1.K4	-	3.K2, 3.K3	-	-	-	-	-	9.P, 9.K1, 9.K2, 9.S2
	7	-	-	-	-	-	-	-	-	-
	8	-	-	-	-	-	-	-	-	-
	9	-	-	-	-	-	-	-	-	-

		PDPC Competencies							
		1	2	3	4	5	6	7	8	9
	10	-	-	3.P, 3.K1, 3.K2, 3.K3, 3.K4, 3.K5, 3.S1, 3.S2	4.P, 4.K3, 4.K4	-	-	-	-	9.P, 9.K2, 9.K3, 9.S2
	11	-	-	3.P, 3.K1, 3.K2, 3.K3, 3.K4, 3.K5, 3.S1, 3.S2	4.P, 4.K3, 4.K4	-	-	-	-	9.P, 9.K2, 9.K3, 9.S2
	12	-	-	3.P, 3.K1, 3.K2, 3.K3, 3.K4, 3.K5, 3.S1, 3.S2	4.P, 4.K3, 4.K4	-	-	-	-	9.P, 9.K2, 9.K3, 9.S2
Northwest Territories[5] (2012)	K	-	-	3.K3	4.P, 4.K2, 4.K3, 4.K4	-	-	-	-	9.P, 9.K1, 9.K2
	1	-	-	3.K3	4.P, 4.K2, 4.K3, 4.K4	-	-	-	-	9.P, 9.K1, 9.K2
	2	-	-	3.K3	4.P, 4.K2, 4.K3, 4.K4	-	-	-	-	9.P, 9.K1, 9.K2
	3	-	-	3.K3	4.P, 4.K2, 4.K3, 4.K4	-	-	-	-	9.P, 9.K1, 9.K2

	PDPC Competencies								
	1	2	3	4	5	6	7	8	9
4	1.P, 1.K1, 1.K2, 1.K3, 1.K4	2P	3.K2, 3.K3	4.P, 4.K2, 4.K3, 4.K4	-	6.P, 6.K4, 6.S3, 6.S4	-	-	9.P, 9.K4, 9.S2, 9.S3
5	1.P, 1.K1, 1.K2, 1.K3, 1.K4	2P	3.K2, 3.K3	4.P, 4.K2, 4.K3, 4.K4	-	6.P, 6.K4, 6.S3, 6.S4	-	-	9.P, 9.K4, 9.S2, 9.S3
6	1.P, 1.K1, 1.K2, 1.K3, 1.K4	2P	3.K2, 3.K3	4.P, 4.K2, 4.K3, 4.K4	-	6.P, 6.K4, 6.S3, 6.S4	-	-	9.P, 9.K4, 9.S2, 9.S3
7	1.P	2.P, 2.K2	3.K2, 3.K5	4.P, 4.S2	-	6.K4, 6.S2, 6.S4	-	-	9.P, 9.K1
8	1.P	2.P, 2.K2	3.K2, 3.K5	4.P, 4.S2	-	6.K4, 6.S2, 6.S4	-	-	9.P, 9.K1
9	1.P	2.P, 2.K2	3.K2, 3.K5	4.P, 4.S2	-	6.K4, 6.S2, 6.S4	-	-	9.P, 9.K1
10	1.P, 1.K1, 1.K2, 1.K4, 1.K5, 1.S1	2.P, 2.K1, 2.K2, 2.K3, 2.K4, 2.K5	3.K2, 3.K3, 3.K4	4.P, 4.K2, 4.K3, 4.K4 4.S2	5.P, 5.K1 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e	6.P, 6.K1, 6.K4, 6.S2, 6.S4	-	-	9.P, 9.K1, 9.K2, 9.K3, 9.K4, 9.S2, 9.S3
11	1.P, 1.K1, 1.K2, 1.K4, 1.K5, 1.S1	2.P, 2.K1, 2.K2, 2.K3, 2.K4, 2.K5	3.K2, 3.K3, 3.K4	4.P, 4.K2, 4.K3, 4.K4 4.S2	5.P, 5.K1 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e	6.P, 6.K1, 6.K4, 6.S2, 6.S4	-	-	9.P, 9.K1, 9.K2, 9.K3, 9.K4, 9.S2, 9.S3

		PDPC Competencies								
		1	2	3	4	5	6	7	8	9
	12	1.P, 1.K1, 1.K2, 1.K4, 1.K5, 1.S1	2.P, 2.K1, 2.K2, 2.K3, 2.K4, 2.K5	3.K2, 3.K3, 3.K4	4.P, 4.K2, 4.K3, 4.K4 4.S2	5.P, 5.K1 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e	6.P, 6.K1, 6.K4, 6.S2, 6.S4	-	-	9.P, 9.K1, 9.K2, 9.K3, 9.K4, 9.S2, 9.S3
Saskat-chewan[6] (2010, 2002, 1999)	K	-	-	-	-	-	-	-	-	-
	1	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-
	5	-	-	-	-	-	-	-	-	-
	6	-	-	-	-	-	-	-	-	-
	7	-	-	-	-	-	-	-	-	-
	8	-	-	-	-	-	-	-	-	-
	9	-	-	-	-	-	-	-	-	-
	10	-	-	-	-	5.P	-	-	-	-
	11	-	-	3.P, 3.K1, 3.K4	-	5.P	-	-	-	-
	12	-	2.P, 2.K4	-	4.K2, 4.K3, 4.K4	5.P	-	-	-	9.P, 9.S2

Note.

[1] All curriculum documents reviewed were in the English language. Nunavut and the Yukon Territory do not develop their own curriculum documents. Nunavut adapts its curricula from Alberta, Saskatchewan, the Northwest Territories, and Manitoba. Yukon schools follow the British Columbia curriculum, adapted to include Yukon content and Yukon First Nations' ways of knowing and doing.

[2] Alberta (2000) resources are located in *Programs of Study: Information and Communication Technology* Curriculum, within Divisions 3 (grades 7-9) and 4 (grades 10-12).

[3] British Columbia resources include *BC Digital Literacy Framework*, K-9 curriculum, and the new 10-12 curriculum. Information for grades 4-9 are found in the BC Digital Framework and for 10-12 in the Information and Communication Technology, Media, and Technology Education strands.

[4] Manitoba resources are located in the *Information and Communication Technologies* (ICT) curriculum.

[5] The Northwest Territories outcomes are grouped by K-3, 4-6, 7-9, and 10-12 in their ICT framework: *Literacy with Information and Communication Technology Across the Curriculum.*

[6] Saskatchewan resources are located in the *Communications Media 10, 20, 30* curricula from 2010. We also reviewed the *Computer Science* 20 and 30 curricula (1999) and *Law 30* curriculum (2002).

Central Canadian Provinces

		PDPC Competencies								
		1	2	3	4	5	6	7	8	9
Ontario[1] (2015, 2009, 2007, 2006, 2002)	K	-	2.P	-	-	-	-	-	-	9.P, 9.K1, 9.K2, 9.K4
	1	-	2.P	-	-	-	-	-	-	9.P, 9.K1, 9.K2, 9.K4
	2	-	2.P	-	-	-	-	-	-	9.P, 9.K1, 9.K2, 9.K4
	3	-	2.P	-	-	-	-	-	-	9.P, 9.K1, 9.K2, 9.K4
	4	-	2.P	-	-	-	-	-	-	9.P, 9.K1, 9.K2, 9.K4
	5	-	2.P	-	-	-	-	-	-	9.P, 9.K1, 9.K2, 9.K4
	6	-	2.P	-	-	-	-	-	-	9.P, 9.K1, 9.K2, 9.K4
	7	-	2.P	-	-	-	-	-	-	9.P, 9.K1, 9.K2, 9.K4

	PDPC Competencies								
	1	2	3	4	5	6	7	8	9
8	-	2.P	-	-	-	-	-	-	9.P, 9.K1, 9.K2, 9.K4
9	1.P, 1.K4, 1.K5, 1.S1, 1.S2	2.P, 2.K1, 2.K3, 2.S2, 2.S3	3.K2, 3.K5	-	-	6.P, 6.K1, 6.K3, 6.S1, 6.S2, 6.S4	-	8.P, 8.K1, 8.K3, 8.S1	9.P, 9.K1, 9.K2, 9.K3, 9.K4, 9.S2, 9.S3
10	-	2.K2, 2.S3	3.P, 3.K1, 3.K2, 3.K3, 3.K4, 3.K5, 3.S1, 3.S2	4.P	5.P, 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.K3, 5.K5	-	-	-	-
11	1.K4	2.K2, 2.S3	3.K1, 3.K2, 3.K3	-	5.P, 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.K3, 5.K5	-	-	-	9.P, 9.K1, 9.K2, 9.K3, 9.K4
12	-	2.P, 2.K1, 2.K2, 2.K3, 2.K5	3.K5	4.P, 4.K1, 4.K2, 4.K3, 4.K4, 4.S1, 4.S2	5.P, 5.K1, 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.K3, 5.K5	-	-	-	-

		PDPC Competencies								
		1	2	3	4	5	6	7	8	9
Québec[2] (2004, 2001)	K	-	-	-	4.P, 4.K1, 4.K2, 4.K3, 4.K4	-	-	-	-	-
	1	-	-	3.S1, 3.S2	4.P, 4.K1, 4.K2, 4.K3, 4.K4	-	-	-	-	-
	2	-	-	3.S1, 3.S2	4.P, 4.K1, 4.K2, 4.K3, 4.K4	-	-	-	-	-
	3	-	-	3.S1, 3.S2	4.P, 4.K1, 4.K2, 4.K3, 4.K4	-	-	-	-	-
	4	-	-	3.S1, 3.S2	4.P, 4.K1, 4.K2, 4.K3, 4.K4	-	-	-	-	-
	5	-	-	3.S1, 3.S2	4.P, 4.K1, 4.K2, 4.K3, 4.K4	-	-	-	-	-

	PDPC Competencies								
	1	2	3	4	5	6	7	8	9
6	-	-	3.S1, 3.S2	4.P, 4.K1, 4.K2, 4.K3, 4.K4	-	-	-	-	-
7	-	-	3.S1	4.P, 4.K1, 4.K2, 4.K3, 4.K4	-	-	-	-	-
8	-	-	3.S1	4.P, 4.K1, 4.K2, 4.K3, 4.K4	-	-	-	-	-
9	-	-	3.S1	4.P, 4.K1, 4.K2, 4.K3, 4.K4	-	-	-	-	-
10	-	-	3.S1	4.P, 4.K1, 4.K2, 4.K3, 4.K4	-	-	-	-	-
11	-	-	3.S1	4.P, 4.K1, 4.K2, 4.K3, 4.K4	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-

Note.

[1] Ontario resources were reviewed in English but parallel resources for French are linked in the English document. Specific curricula reviewed included Canadian and World

Studies (2015), Health and Physical Education (2015), Technology Education (2009), Computer Studies (2008), English (2007), Business Studies (2006), and Interdisciplinary Studies (2002).

[2] Québec resources were reviewed in French and English and descriptors were parallel. PDPC Competency 1 was addressed within Broad Areas of Learning (Media Literacy); Competencies 2, 6, and 7 were addressed within Broad Areas of Learning (Media Literacy) and Protestant, Moral, and Religious Education; Competency 3 was addressed within the ICT strand; Competency 4 was addressed in the Broad Areas of Learning (Environmental Awareness and Consumer Rights and Responsibilities); and Competency 9 was addressed in Broad Areas of Learning: (Media Literacy & Citizenship and Community Life)

Eastern Canadian Provinces[1]

		PDPC Competencies								
		1	2	3	4	5	6	7	8	9
New Brunswick[2] (2014, 2004)	K									
	1	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-
	5	-	-	-	-	-	-	-	-	-
	6	-	-	-	-	-	-	-	-	-
	7	-	-	-	-	-	-	-	-	-
	8	-	-	-	-	-	-	-	-	-
	9	-	-	-	-	-	-	-	-	-
	10	-	-	-	-	-	-	-	-	-
	11	-	-	-	-	-	-	-	-	-
	12	-	2.K4	3.P	4.P, 4.K3, 4.K4, 4.S1, 4.S2	5.P, 5.K1 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e	6.S4	-	-	9.P, 9.K1, 9.K2, 9.S2, 9.S3
Newfound-land and Labrador[3] (2013)	K	-	2.P, 2.K1	3.P, 3.S2	-	-	-	-	-	-
	1	-	2.P, 2.K1	3.P, 3.S2	-	-	-	-	-	-
	2	-	2.P, 2.K1	3.P, 3.S2	-	-	-	-	-	-
	3	-	2.P, 2.K1, 2.K4, 2.K5	3.P, 3.K1, 3.K5	4.P, 4.K2	-	6.P, 6.K4	-	-	9.P
	4	-	2.P, 2.K1, 2.K4, 2.K5	3.P, 3.K1, 3.K5	4.P, 4.K2	-	6.P, 6.K4	-	-	9.P

	PDPC Competencies								
	1	2	3	4	5	6	7	8	9
5	-	2.P, 2.K1, 2.K4, 2.K5	3.P, 3.K1, 3.K5	4.P, 4.K2	-	6.P, 6.K4	-	-	9.P
6	1.P	2.P, 2.K4	3.P, 3.K1, 3.S1, 3.S2	4.P, 4.K2, 4.K3	5.P, 5.K1 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e	6.P, 6.S1, 6.S2, 6.S3	-	-	-
7	1.P	2.P, 2.K4	3.P, 3.K1, 3.S1, 3.S2	-	5.P, 5.K1 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e	6.P, 6.S1, 6.S2, 6.S3	-	-	-
8	1.P	2.P, 2.K4	3.P, 3.K1, 3.S1, 3.S2	-	5.P, 5.K1 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e	6.P, 6.S1, 6.S2, 6.S3	-	-	-
9	1.P, 1.K4, 1.K5	2.P, 2.K4	3.P, 3.S1	-	5.P, 5.S1	6.P, 6.S4	-	-	9.P, 9.S3
10	1.P, 1.K4, 1.K5	2.P, 2.K4	3.P, 3.S1	-	5.P, 5.S1	6.P, 6.S4	-	-	9.P, 9.S3
11	1.P, 1.K4, 1.K5	2.P, 2.K4	3.P, 3.S1	-	5.P, 5.S1	6.P, 6.S4	-	-	9.P, 9.S3

		PDPC Competencies								
		1	2	3	4	5	6	7	8	9
	12	1.P, 1.K4, 1.K5	2.P, 2.K4	3.P, 3.S1	-	5.P, 5.S1	6.P, 6.S4	-	-	9.P, 9.S3
Nova Scotia[4] (2005)	K	-	-	-	4.P	-	-	-	8.P, 8.K1	9.P, 9.K1, 9.K2
	1	-	-	-	4.P	-	-	-	8.P, 8.K1	9.P, 9.K1, 9.K2
	2	-	-	-	4.P	-	-	-	8.P, 8.K1	9.P, 9.K1, 9.K2
	3	-	-	-	4.P	-	-	-	8.P, 8.K1	9.P, 9.K1, 9.K2
	4	1.K4	2.P, 2.K1, 2.K3	3.K2, 3.K5	4.P	5.P, 5.K1	6.P, 6.K1	-	8.P	9.P, 9.K2, 9.S3
	5	1.K4	2.P, 2.K1, 2.K3	3.K2, 3.K5	4.P	5.P, 5.K1	6.P, 6.K1	-	8.P	9.P, 9.K2, 9.S3
	6	1.K4	2.P, 2.K1, 2.K3	3.K2, 3.K5	4.P	5.P, 5.K1	6.P, 6.K1	-	8.P	9.P, 9.K2, 9.S3
	7	1.P, 1.K1, 1.K2, 1.S1	2.P, 2.K1, 2.K3, 2.K4, 2.K5	3.K2	4.P, 4.K2, 4.K3, 4.K4	5.P, 5.K1	6.P, 6.K1	-	-	9.P, 9.K1, 9.K2, 9.K4, 9.S2 9.S3

	PDPC Competencies								
	1	2	3	4	5	6	7	8	9
8	1.P, 1.K1, 1.K2, 1.S1	2.P, 2.K1, 2.K3, 2.K4, 2.K5	3.K2	4.P, 4.K2, 4.K3, 4.K4	5.P, 5.K1	6.P, 6.K1	-	-	9.P, 9.K1, 9.K2, 9.K4, 9.S2 9.S3
9	1.P, 1.K1, 1.K2, 1.S1	2.P, 2.K1, 2.K3, 2.K4, 2.K5	3.K2	4.P, 4.K2, 4.K3, 4.K4	5.P, 5.K1	6.P, 6.K1	-	-	9.P, 9.K1, 9.K2, 9.K4, 9.S2 9.S3
10	1.P, 1.K1	2.P, 2.K4, 2.K5	3.P, 3.K2, 3.S1	-	5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.K3, 5.K5, 5.S1	-	-	-	9.P, 9.K1, 9.K2, 9.S3
11	1.P, 1.K1	2.P, 2.K4, 2.K5	3.P, 3.K2, 3.S1	-	5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.K3, 5.K5, 5.S1	-	-	-	9.P, 9.K1, 9.K2, 9.S3
12	1.P, 1.K1	2.P, 2.K4, 2.K5	3.P, 3.K2, 3.S1	-	5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.K3, 5.K5, 5.S1	-	-	-	9.P, 9.K1, 9.K2, 9.S3

		PDPC Competencies								
		1	2	3	4	5	6	7	8	9
Prince Edward Island[5] (2009, 2008)	K	-	-	-	-	-	-	-	-	-
	1	-	-	-	-	-	-	-	-	-
	2	-	-	-	-	-	-	-	-	-
	3	-	-	-	-	-	-	-	-	-
	4	-	-	-	-	-	-	-	-	-
	5	-	-	-	-	-	-	-	-	-
	6	-	-	-	-	-	-	-	-	-
	7	-	-	-	-	-	-	-	-	-
	8	-	-	-	-	-	-	-	-	-
	9	-	-	-	-	-	-	-	-	-
	10	1.P, 1.K1, 1.K2, 1.K3, 1.K4, 1.K5, 1.S1, 1.S2	2.P, 2.K1, 2.K3, 2.K4, 2.S1, 2.S2	3.P, 3.K1, 3.K2, 3.K3, 3.S4 3.K5, 3.S1, 3.S2	4.P, 4.K1, 4.K2, 4.K3, 4.S1, 4.S2	5.P, 5.K1, 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.S1, 5.S2	6.P, 6.K1 6.K3, 6.K4, 6.S1, 6.S2, 6.S4	-	8.K1, 8.K3, 8.S1	9.P, 9.K2, 9.K3, 9.K4 9.S1 9.S2 9.S3
	11	1.P, 1.K1, 1.K2, 1.K3, 1.K4, 1.K5, 1.S1, 1.S2	2.P, 2.K1, 2.K3, 2.K4, 2.S1, 2.S2	3.P, 3.K1, 3.K2, 3.K3, 3.S4 3.K5, 3.S1, 3.S2	4.P, 4.K1, 4.K2, 4.K3, 4.S1, 4.S2	5.P, 5.K1, 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.S1, 5.S2	6.P, 6.K1 6.K3, 6.K4, 6.S1, 6.S2, 6.S4	-	8.K1, 8.K3, 8.S1	9.P, 9.K2, 9.K3, 9.K4 9.S1 9.S2 9.S3
	12	1.P, 1.K1, 1.K2, 1.K3, 1.K4, 1.K5, 1.S1, 1.S2	2.P, 2.K1, 2.K3, 2.K4, 2.S1, 2.S2	3.P, 3.K1, 3.K2, 3.K3, 3.S4 3.K5, 3.S1, 3.S2	4.P, 4.K1, 4.K2, 4.K3, 4.S1, 4.S2	5.P, 5.K1, 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.S1, 5.S2	6.P, 6.K1 6.K3, 6.K4, 6.S1, 6.S2, 6.S4	-	8.K1, 8.K3, 8.S1	9.P, 9.K2, 9.K3, 9.K4 9.S1 9.S2 9.S3

Note.

[1] The eastern provinces use a common Technology Education curriculum: Atlantic Canada Technology Education Curriculum: General Curriculum Outcomes for Technology Education (GCOTE) which states that students will have reached the competencies by grade 12. No specific grade levels are included.

[2] English and French resources for New Brunswick were parallel. The GCOTE was reviewed for New Brunswick, as well as the *Media Studies 120* (2014) curriculum and *Law 120* (2004) curriculum.

[3] Resources for Newfoundland and Labrador were reviewed in English. The GCOTE was reviewed for Newfoundland and Labrador, as well as the *Safe and Caring Schools Policy* (2013).

[4] Resources for Nova Scotia were reviewed in English. The GCOTE was reviewed for Nova Scotia as well as the *Integration of Information and Communication Technology within the Curriculum* (2005).

[5] Resources for Prince Edward Island were reviewed in English. The GCOTE was reviewed for PEI as well as the Computer Literacy units for the *Information Technology Communication* (2008) and *Computer Studies* (2009) curricula.

Appendix B: PDPC Alignment with Non-Formal / Third Party Programs

In this appendix, we rate relevant non-formal or third party programs for their alignment with the PDPC competencies: Competency 1 *Personal Data*; Competency 2 *Privacy, civil liberties, and protection of personal data*; Competency 3 *Understanding the digital environment – technical aspects*; Competency 4 *Understanding the digital environment – economic aspects*; Competency 5 *Understanding personal data regulations and legislation*; Competency 6 *Understanding personal data regulations: Controlling the use of personal information*; Competency 7 *Managing my data: Learning to exercise my rights*, Competency 8 *Managing my data: Learning to protect myself online*; and Competency 9 *The digital world: Becoming a digital citizen*.

Unlike provincial and territorial curricula which list objectives that relate to a competency, these resources aim to teach about areas such as digital citizenship and privacy. Overall, 11 programs were reviewed: 2 available in French and 9 in English. The following table lists the characteristics of each. Programs were typically designed for parents or teachers across the grades, although some also had resources for students.

Program Title	Language	Grade	Audience	Province/Region
Common Sense Media	E	K-12	Teachers, Parents, Students	Online, USA
Connect ED	E/F	4-6	Teachers, Parents, Students	Online, Canada
Cyber Cops	E/F	7-8	Teachers, Parents, Students	Online, Canada
CyberTip	E/F	K-12	Teachers, Parents, Students	Online, Canada
Privacy and the Internet (Éducaloi)	E/F	K-12	Teachers, Parents, Students	Online, Québec
Guide pour gérer les aspects juridiques du Web 2.0 en milieu scolaire	F	K-12	Teachers, Parents	Online, Québec

Internet 101	E/F	K-12	Teachers, Parents	Online, Canada
Preparing for the workforce: Building a digital portfolio (Learn Québec)	E/F	10-11	Teachers, Parents, Students	Online, Québec
Media Smarts	E/F	K-12	Teachers, Parents	Online, Canada
OSAPAC (Ontario Software Acquisition Program Advisory Committee)	E/F	K-12	Teachers, Parents, Students	Ontario
Protect Kids Online: The Door Not Locked	E/F	K-12	Teachers, Parents, Students	Online, Canada
Wired Safety	E	K-12	Teachers, Parents, Students	Online, USA

Results are presented by title. A grade of A was assigned for exemplary coverage or, specifically, when all or most of the competency descriptors were addressed within the framework and/or the specific objectives. A grade of B was assigned when at least half the descriptors were addressed; C when fewer than half the descriptors were addressed; and D when the descriptors were mentioned or received very little coverage.

	PDPC Competencies								
	1	2	3	4	5	6	7	8	9
Common Sense Media	-	B	-	-	-	A	B	A	A
Connect[ED]	B	B	-	-	-	D	B	-	A
Cyber Cops	B	B	C	-	B	C	B	B	A
CyberTip	B	B	-	-	C	B	C	C	A

Privacy and the Internet (Éducaloi)	A	A	C	C	B	B	B	A	B
Guide pour gérer les aspects juridiques du Web 2.0 en milieu scolaire	A	B	B	B	B	A	B	B	A
Internet 101	D	D	-	B	-	D	-	C	B
Preparing for the workforce: Building a digital portfolio	B	-	B	-	B	B	B	B	A
Media Smarts	A	A	B	A	A	B	C	B	A
OSAPAC	A	A	B	-	B	B	B	-	A
The Door Not Locked	B	C	-	-	D	B	-	-	A
Wired Safety	A	A	A	A	A	A	A	A	A

Appendix C: Competency Exemplars by Province and Territory (English and French)

Competency 1: Personal Data

Source	Page #	Grade(s)	Text from Document	Codes Assigned
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 5 of pdf document	6-7	Digital Literacy: • Internet Safety: Including privacy and security (secured connections, passwords, personal information), digital footprint and dossier, cyberbullying, online scams, and cybercrimes	1.P, 1.K1, 1.K3
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 6 of pdf document	6-7	Media Arts: • issues in ethical media practices, including cultural appropriation, moral copyright, reproduction, and privacy	1.K3, 1.K4
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 9 of pdf document	8	Digital Literacy: • Elements of digital citizenship: digital self image, creative credit and copyright, relationships and copyright, cyberbullying, legal and ethical issues.	1.P
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 10 of pdf document	8	Media Arts: • issues in ethical media practices, including cultural appropriation, moral copyright, reproduction, and privacy	1.P, 1.K3
British Columbia Computer Studies 10	1	10	Computer Studies: • Computer security risks • Risks and rewards associated with big data, multi-device connectivity, and the Internet of Things	1.P, 1.K3, 1.K4, 1.K5
British Columbia Web Development 10	1	10	Web Development: • security and privacy implications	1.P, 1.K3, 1.K4, 1.K5
British Columbia Computer Information Systems 11	1	11	Computer Information Systems: • ongoing preventive maintenance, including data security and online/offline backup solutions	1.P
British Columbia Digital Communications 11	1	11	Digital Communications: • issues in digital communication • digital communication risks	1.P, 1.K3, 1.K4
Manitoba Curriculum Intro ICT Learning Experiences	4-5	4-6	ICT.8: In this introductory Internet learning experience, students develop their understanding of the Internet, learn what they can expect to find on the World Wide Web, and	1.P, 1.K4

Source	Page #	Grade(s)	Text from Document	Codes Assigned
			learn how to search online effectively for pertinent, valid, and reliable information.	
Newfoundland and Labrador GCOTE Framework Document	23	6-8	General Curriculum Outcomes (GCO)-5: Technological Responsibility [5.303] develop and demonstrate risk-management strategies for a variety of technological activities	1.P
Newfoundland and Labrador GCOTE Framework Document	23	9-12	General Curriculum Outcomes (GCO)-5: Technological Responsibility [5.403] demonstrate responsible leadership in taking proper measures to manage current and future technological risk	1.P, 1.K4, 1.K5
Northwest Territories Literacy and ICT Across the Curriculum	56	4-6	INQUIRY COMPONENT. ETHICS and RESPONSIBILITY -applies the rules about internet safety (username and password privacy) -understands healthy uses of ICT (eg. learning, sharing ideas, building relationships…) and unhealthy uses (eg. cyberbullying, hatred, hurting reputations…)	1.P, 1.K1, 1.K2, 1.K3, 1.K4
Northwest Territories Literacy and ICT Across the Curriculum	60	7-9	INQUIRY COMPONENT. COLLABORATION -sometimes collaborates with others from a distance to pose questions, share and pool expertise, bridge ingenuity gaps, and determine risks using email, wikis, blogs, conferencing technologies, and other social media	1.P
Northwest Territories Literacy and ICT Across the Curriculum	64	10-12	INQUIRY COMPONENT. ETHICS and RESPONSIBILITY -understands the need for rules about internet safety such as username and password privacy and careful use of words and ideas INQUIRY COMPONENT. SOCIAL IMPLICATIONS -analyzes the advantages and disadvantages of ICT use in society -analyzes the trend of sharing information in a socially networked world -makes reasoned judgments about society's right to information versus the right to individual privacy INQUIRY COMPONENT. COLLABORATION -assesses, in collaborative settings, the value, purpose, and ethics of sharing community generated primary data on media sharing sites	1.P, 1.K1, 1.K2, 1.K4, 1.K5, 1.S1
Nova Scotia ICT Curriculum	18	4-6	PRODUCTIVITY PTS 6.2 (RELATES TO 3.2) identify and describe different ways in which information available for use at this level can be created, stored, used, represented, and transmitted with growing independence	1.K4
Nova Scotia	20	7-9	SOCIAL, ETHICAL, & HUMAN ISSUES	1.P,

Source	Page #	Grade(s)	Text from Document	Codes Assigned
ICT Curriculum			SEHI 9.4 (RELATES TO 6.2, 6.7, 6.8) demonstrate an understanding of, and a commitment to, accuracy, ethical behaviour, and personal privacy and safety as they create and distribute information about themselves, others, and curriculum topics under study	1.K1, 1.K2, 1.S1
Nova Scotia ICT Curriculum	22	10-12	SOCIAL, ETHICAL, & HUMAN ISSUES 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	1.P, 1.K1
Ontario Health and Physical Education	102	9	Personal Safety and Injury Prevention C1.2 demonstrate an understanding of the benefits and risks of using electronic communication technologies (e.g., easy access to useful information and entertainment but also to harmful or undesirable information and entertainment, such as pornography; enhanced ability to stay in touch with friends but also increased possibility of exposure to sexual predators, bullying, and sexting; ability to communicate one's thoughts and creative efforts to the rest of the world but also increased potential for loss of privacy), and describe strategies that they can apply to ensure their safety while using these technologies [IS, CT]	1.P, 1.K4, 1.K5, 1.S1, 1.S2
Ontario Technology Education	54	11	*Overall Expectations:* D1. demonstrate an understanding of and apply safe work practices when performing communications technology tasks;	1.K4
Prince Edward Island Information Technology Communication 401	43	10-12	*Specific Curricular Outcome for Computer Literacy (CL):* CL7.4 Is it ethical to access a private wireless network that has been left open without security (hot spot)? CL7.5 Research recent security/privacy concerns about an online service such as Facebook or Second Life. Report findings. CL7.6 Prepare a short report for a younger relative (or his or her parents) explaining how to safely use online social networking sites. CL7.7 Prepare an online survey to determine the degree of knowledge peers possess about online privacy and the use of social networking sites. CL7.8 Create a skit or video demonstrating a privacy concern with a social networking site. e.g.: someone writing personal information on a wall in real life for everyone to read, telling everyone in class/school a personal piece of information face-to-face from the front of a room, etc.	1.P, 1.K1, 1.K2, 1.K3, 1.K4, 1.K5, 1.S1, 1.S2

Source	Page #	Grade(s)	Text from Document	Codes Assigned
			CL7.9 Demonstrate ethical behaviour in regards to copyright laws and due diligence in regards to online privacy and personal safety.	
Prince Edward Island Information Technology Communication 401	47	10-12	*Specific Curricular Outcome for Computer Literacy (CL):* CL8.2: Examine the schools Internet "Acceptable Use Policy" to discuss security measures that exist on the schools' computer network. Identify ways that computer ethics or crime might come into play within the school context. Have students suggest possible penalties for committing certain types of offenses eg. trying to find out others' passwords, accessing forbidden sites on the Internet, damaging equipment or stealing mouse balls, changing passwords of students who might forget to log off the system, sending e-mail under the name of the person who forgot to log off, sending chain letters, sending unwanted or off-coloured e-mails to individuals within the school, trying to gain unauthorized access to other areas within the network.	1.P, 1.K4, 1.K5
Prince Edward Island Introductory Computer Studies CMP521A	81	10-12	*Specific Curricular Outcome for Computer Literacy (LY):* LY1.2 Digital encoding is used for all electronic media. Research an aspect of encoding. i.e.: sound (wave to digital format), images (colour to digital format), laser, DVD, IP addressing, etc.)	1.K4
Prince Edward Island Introductory Computer Studies CMP521A	85	10-12	*Specific Curricular Outcome for Computer Literacy (LY):* LY4.5 Prepare a short report or story book for a younger relative (or his or her parents) explaining how to safely use online social networking sites. LY4.6 Prepare an online survey to determine the degree of knowledge peers possess about online privacy and the use of social networking sites.	1.P, 1.K1, 1.K, 1.K3, 1.S1, 1.S2

Competency 2: Privacy, civil liberties, and protection of personal data

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Alberta Curriculum Information and Communication Technology	13	4-6	Division 2: F3: Students will demonstrate a moral and ethical approach to the use of technology. 2.5 respect the privacy and products of others 2.6 use electronic networks in an ethical manner 2.7 comply with copyright legislation	2.P
Alberta Curriculum Information and Communication Technology	13	7-9	Division 3: F.3 - Students will demonstrate a moral and ethical approach to the use of technology. -Specific Outcomes: 3.2: explain the issues involved in balancing the right to access information with the right to personal privacy 3.6: model and assume personal responsibility for ethical behaviour and attitudes and acceptable use of information technologies and sources in local and global contexts	2.P, 2.K3, 2.K4, 2.K5
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 5 of pdf document	6-7	Digital Literacy Internet Safety: Including privacy and security (secured connections, passwords, personal information), digital footprint and dossier, cyberbullying, online scams, and cybercrimes • elements of digital citizenship: digital self image, creative credit and copyright, relationships and copyright, cyberbullying, legal and ethical issues. • ethical and legal implications of current and future technologies	2.P, 2.K3, 2.K4, 2.K5
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 6 of pdf document	6-7	Media Arts • issues in ethical media practices, including cultural appropriation, moral copyright, reproduction, and privacy	2.P, 2.K3
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 9 of pdf document	8	Digital Literacy • elements of digital citizenship: digital self image, creative credit and copyright, relationships and copyright, cyberbullying, legal and ethical issues. • ethical and legal implications of current and future technologies	2.P, 2.K3, 2.K4

Source	Page #	Grade(s)	Text from Document	Grade Assigned
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 10 of pdf document	8	Media Arts • issues in ethical media practices, including cultural appropriation, moral copyright, reproduction, and privacy	2.P, 2.K3
British Columbia Computer Studies 10	1	10	Computer Studies • risks and rewards associated with big data, multi-device connectivity, and the Internet of Things • impacts of computers and technology on society and ethical issues of technology use and environmental sustainability • digital literacy and digital citizenship	2.P, 2.K3, 2.K4, 2.K5
British Columbia Web Development 10	1	10	Web Development • copyright, creative commons, and fair use protocols for media and content • security and privacy implications	2.P
British Columbia Social Studies – Law Studies 12	1	12	Social Studies- Law Studies -Understanding legal rights and responsibilities allows citizens to participate more fully in society	2.P, 2.K3, 2.K4
New Brunswick Media Studies 120	6	12	Media Studies Curriculum 1.3 examine how media shape ideologies and culture	2.K4
Newfoundland and Labrador GCOTE Framework Document	22	K-2	General Curriculum Outcomes (GCO)-5: Technological Responsibility [5.101] demonstrate a growing awareness of the rights and responsibilities of others and self when using technological resources [5.102] demonstrate an understanding of health and safety rules and standards [5.103] identify risks that might be present if specific technological actions are taken, and explore ways to manage them	2.P, 2.K1
Newfoundland and Labrador GCOTE Framework Document	22	3-5	General Curriculum Outcomes (GCO)-5: Technological Responsibility [5.201] demonstrate respect for the rights and responsibilities of others and self when using technological resources	2.P, 2.K1, 2.K4, 2.K5

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			[5.202] demonstrate increasing awareness of healthy and safe practices when engaging in technological activity [5.203] demonstrate increasing awareness of the need to take proper measures to manage technological risk	
Newfoundland and Labrador GCOTE Framework Document	19	6-8	General Curriculum Outcomes (GCO)- 3: History and Evolution of Technology [3.303] examine technological literacy and capability in modern society and their effects on citizenship and education	2.K4
Newfoundland and Labrador GCOTE Framework Document	23	6-8	General Curriculum Outcomes (GCO)-5: Technological Responsibility [5.301] demonstrate an understanding of the nature and purpose of legal and ethical rules and principles [5.302] develop personal rules of conduct that ensure healthy and safe practices	2.P, 2.K4
Newfoundland and Labrador GCOTE Framework Document	19	9-12	General Curriculum Outcomes (GCO)- 3: History and Evolution of Technology [3.402] evaluate the symbiotic roles of technology and science in modern society [3.403] analyse the symbiotic relationship between technology and education, including factors that influence standards for technological literacy and capability, and ways that the community responds [3.404] critically evaluate the effects of accelerating rates of technological change on self and society	2.K4
Newfoundland and Labrador GCOTE Framework Document	23	9-12	General Curriculum Outcomes (GCO)-5: Technological Responsibility [5.401] demonstrate responsible leadership in employing legal and ethical rules and principles [5.402] demonstrate responsible leadership in employing health and safety rules and standards [5.403] demonstrate responsible leadership in taking proper measures to manage current and future technological risk	2.P
Northwest Territories Literacy and ICT Across the Curriculum	56	4-6	INQUIRY COMPONENT. ETHICS and RESPONSIBILITY -applies the rules about internet safety (username and password privacy) -understands	2.P

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			healthy uses of ICT (eg. learning, sharing ideas, building relationships…) and unhealthy uses (eg. cyberbullying, hatred, hurting reputations…) INQUIRY COMPONENT. SOCIAL IMPLICATIONS -can tell about how ICT is used at home, school, and the community for recreation, communication, education, sales, and health care -can tell about how cyberbullying away from school (or in school) can affect the class and school community	
Northwest Territories Literacy and ICT Across the Curriculum	60	7-9	INQUIRY COMPONENT. ETHICS and RESPONSIBILITY -can identify possible health issues associated with ICT -follows the school boards acceptable–use of ICT policy -understands healthy and unhealthy uses of ICT; and how cyberbullying impacts the classroom and school community INQUIRY COMPONENT. SOCIAL IMPLICATIONS -analyzes current trends in ICT and predict effects of emerging technologies on people in both the developed and developing world - analyzes the advantages and disadvantages of ICT use in society -analyzes and discusses how people work, socialize, and change according to new ICT -can tell about how personal career choices will require ICT competencies	2.P, 2.K2
Northwest Territories Literacy and ICT Across the Curriculum	64	10-12	INQUIRY COMPONENT. ETHICS and RESPONSIBILITY -understands the need for rules about internet safety such as username and password privacy and careful use of words and ideas INQUIRY COMPONENT. SOCIAL IMPLICATIONS -analyzes the advantages and disadvantages of ICT use in society -analyzes the trend of sharing information in a socially networked world -studies current trends in ICT and predicts and weighs future advantages and opportunities against the potential disadvantages and risks for society of creating new ICTs	2.P, 2.K1, 2.K2, 2.K3, 2.K4, 2.K5

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			-makes reasoned judgments about society's right to information versus the right to individual privacy INQUIRY COMPONENT. COLLABORATION -assesses, in collaborative settings, the value, purpose, and ethics of sharing community generated primary data on media sharing sites -helps the group understand the extent of the "fair dealing" rights the public have to use group data placed online by using Sec. 29 of the Canadian Copyright Act	
Nova Scotia ICT Curriculum	18	4-6	SOCIAL, ETHICAL, & HUMAN ISSUES SEHI 6.2 (RELATES TO 3.2) demonstrate respect for the privacy and intellectual property of others, maintain their personal privacy and safety SEHI 6.3 (RELATES TO 3.2) begin to identify social and ethical issues associated with the global access and distribution of information; and to develop concern for the accuracy of information, personal privacy and safety when in electronic environments such as Internet, with the assistance of the teacher SEHI 6.7 (RELATES TO 3.5) include in their own work the copyrighted materials of others only when permission to do so has been received	2.P, 2.K1, 2.K3
Nova Scotia ICT Curriculum	20	7-9	SOCIAL, ETHICAL, & HUMAN ISSUES SEHI 9.1 (RELATES TO 6.1, 6.2, 6.3) demonstrate understanding of the nature of technology and its impacts on different societies and environments; using technology, in local and global contexts, with due regard for the legal and human rights of others SEHI 9.2 (RELATES TO 6.3, 6.4, 6.5, 6.6) identify and demonstrate the values and techniques of mass media, popular culture, and electronic information environments, and evaluate the effects of these techniques SEHI 9.4 (RELATES TO 6.2, 6.7, 6.8) demonstrate an understanding of, and a commitment to, accuracy, ethical behaviour, and personal privacy and safety as they create and distribute information about themselves, others, and curriculum topics under study	2.P, 2.K1, 2.K3, 2.K4, 2.K5
Nova Scotia	22	10-12	SOCIAL, ETHICAL, & HUMAN ISSUES	2.P,

Source	Page #	Grade(s)	Text from Document	Grade Assigned
ICT Curriculum			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 12.5 (RELATES TO 9.3, 9.4) act responsibly when faced with ethical issues that arise from their use of information and ICT	2.K4, 2.K5
Ontario Various Curriculum Preface Information	various	K-12	"Although the Internet is a powerful learning tool, there are potential risks attached to its use. All students must be made aware of issues related to Internet privacy, safety, and responsible use, as well as of the potential for abuse of this technology, particularly when it is used to promote hatred. ICT tools are also useful for teachers in their teaching practice, both for whole-class instruction and for the design of curriculum units that contain varied approaches to learning in order to meet diverse student needs."	2.P
Ontario Health and Physical Education	102	9	Personal Safety and Injury Prevention C1.2 demonstrate an understanding of the benefits and risks of using electronic communication technologies (e.g., easy access to useful information and entertainment but also to harmful or undesirable information and entertainment, such as pornography; enhanced ability to stay in touch with friends but also increased possibility of exposure to sexual predators, bullying, and sexting; ability to communicate one's thoughts and creative efforts to the rest of the world but also increased potential for loss of privacy), and describe strategies that they can apply to ensure their safety while using these technologies [IS, CT]	2.P, 2.K1, 2.K3, 2.S2, 2.S3
Ontario Communications Technology	43/55	10	Exploring Communications Technology (TGJ1O) This exploratory course introduces students to concepts and skills in communications	2.K2, 2.S3

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			technology, which encompasses television/video and movie production, radio and audio production, print and graphic communications, photography, and interactive new media and animation. Students will develop an awareness of related environmental and societal issues, and will begin to explore secondary and postsecondary pathways leading to careers in the field. C2. demonstrate an understanding of social effects and issues arising from the use of communications media technologies and the importance of representing cultural and social diversity in media productions.	
Ontario Computer Studies – Introduction to Computer Studies	37	10	Introduction to Computer Studies *Overall Expectations:* C1. describe key aspects of the impact of computers and related technologies on society; C2. describe computer use policies that promote environmental stewardship and sustainability; C3. describe legal and ethical issues related to the use of computing devices; C4. describe postsecondary education and career prospects related to computer studies. (page 37)	2.K2, 2.S3
Ontario Computer Technology	43/61	10	Exploring Computer Technology (TEJ1O) This exploratory course introduces students to concepts and skills in computer technology, which encompasses computer systems, networking, interfacing, and programming, as well as electronics and robotics. Students will develop an awareness of related environmental and societal issues, and will begin to explore secondary and postsecondary pathways leading to careers in the field. *Overall Expectations:* C2. identify effects of the widespread use of computers and associated technologies on society.	2.K2, 2.S3
Ontario Media Studies	154	11	Media Studies *Overall Expectations:* B1. Understanding Media Perspectives: analyse and critique media representations of people, issues, values, and behaviours;	2.K2, 2.S3

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			B2. Understanding the Impact of Media on Society: analyse and evaluate the impact of media on society.	
Ontario Technology Education	49/53	11	Technology Education *Overall Expectations:* C2. demonstrate an understanding of the social effects of current communications media technologies and the importance of respecting cultural and societal diversity in the production of media projects.	2.K2, 2.S3
Ontario Interdisciplinary Studies: Information and Citizenship	16	12	Information and Citizenship, Grade 12, This course explores Canadian and international law and policy regarding the use of information in society. Students will analyse historical and contemporary sources from a variety of disciplines to determine specific legal issues arising from society's use of information. They will investigate criminal laws and procedures regarding privacy and security, including those involving patents, copyright, and intellectual property. They will also examine the access to and creation, storage, and use of information for private and public purposes, and will apply methods of inquiry and research used by legal practitioners to solve problems.	2.P, 2.K1, 2.K3, 2.K5
Ontario Interdisciplinary Studies: Spatial Technologies in Action	256	12	Spatial Technologies in Action *Overall Expectations:* D1. Relationships between Systems: investigate and analyse relationships and interactions within and between physical and human systems, using a variety of spatial technologies (FOCUS ON: Spatial Significance; Interrelationships) D2. International and Social Implications: investigate and evaluate the role of spatial technologies in national and global security and safety, global communications, and international cooperation (FOCUS ON: Interrelationships; Geographic Perspective) D3. Global System Interactions: apply, and explain the use of, spatial technologies to analyse interactions between people, places, and issues at a global level (FOCUS ON: Patterns and Trends; Interrelationships)	2.K2

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Ontario Interdisciplinary Studies: World History since the Fifteenth Century	404	12	World History since the Fifteenth Century *Overall Expectations:* E1. Social, Economic, and Political Context: analyse the significance of various social, economic, and political policies, developments, and ideas in various regions of the world since 1900 (FOCUS ON: Historical Significance; Cause and Consequence)	2.K2, 2.S3
Prince Edward Island Information Technology Communication 401	43	10-12	*Specific Curricular Outcome for Computer Literacy (CL):* CL7.4 Is it ethical to access a private wireless network that has been left open without security (hot spot)? CL7.5 Research recent security/privacy concerns about an online service such as Facebook or Second Life. Report findings. CL7.6 Prepare a short report for a younger relative (or his or her parents) explaining how to safely use online social networking sites. CL7.7 Prepare an online survey to determine the degree of knowledge peers possess about online privacy and the use of social networking sites. CL7.8 Create a skit or video demonstrating a privacy concern with a social networking site. e.g.: someone writing personal information on a wall in real life for everyone to read, telling everyone in class/school a personal piece of information face-to-face from the front of a room, etc. CL7.9 Demonstrate ethical behaviour in regards to copyright laws and due diligence in regards to online privacy and personal safety.	2.P, 2.K1, 2.K3, 2.K4, 2.S1, 2.S2
Prince Edward Island Information Technology Communication 401	47	10-12	*Specific Curricular Outcome for Computer Literacy (CL):* CL8.2: Examine the schools Internet "Acceptable Use Policy" to discuss security measures that exist on the schools' computer network. Identify ways that computer ethics or crime might come into play within the school context. Have students suggest possible penalties for committing certain types of offenses eg. trying to find out others' passwords, accessing forbidden sites on the Internet, damaging equipment or stealing mouse balls, changing passwords of students who might forget to log off the system, sending e-mail under the name of the person who forgot to log off, sending	2.P

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			chain letters, sending unwanted or off-coloured e-mails to individuals within the school, trying to gain unauthorized access to other areas within the network.	
Prince Edward Island Information Technology Communication 401	59	10-12	*Specific Curricular Outcome for Internet Education:* IT2.6: Is the use of the Internet a right or a privilege? Discuss. (acceptable use policies, digital divide, protection of minors, access to information, etc.)	2.P,
Prince Edward Island Introductory Computer Studies CMP521A	83	10-12	*Specific Curricular Outcome for Computer Literacy (LY):* LY3.1 Prepare a list of questions for a guest speaker on the topics of copyright laws, privacy, and/or ethics. LY3.2 Identify copyright information on a favourite music or video recording. LY3.3 Identify steps involved in registering an original media creation. LY3.4 Research a recent case of copyright infringement. Summarize and report. LY3.5 Provide an example of a legal and an ethical issue. LY3.6 Develop a code of ethics for computer users.	2.P, 2.K1, 2.K3,
Prince Edward Island Introductory Computer Studies CMP521A	85	10-12	*Specific Curricular Outcome for Computer Literacy (LY):* LY4.4 Research recent security/privacy concerns and rights about online services such as wiki, blog, or collaborative documents. LY4.5 Prepare a short report or story book for a younger relative (or his or her parents) explaining how to safely use online social networking sites. LY4.6 Prepare an online survey to determine the degree of knowledge peers possess about online privacy and the use of social networking sites.	2.P, 2.K3, 2.K4,
Saskatchewan Law 30	154	12	International Torts: Privacy Know that the tort of invasion of privacy is evolving in light of the advancing technologies in the communications industry.	2.P, 2.K4

Competency 3: Understanding the digital environment – technical aspects

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British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 5 of pdf document	6-7	Digital Literacy: • Internet Safety: Including privacy and security (secured connections, passwords, personal information), digital footprint and dossier, cyberbullying, online scams, and cybercrimes	3.K5
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 9 of pdf document	8	Digital Literacy: • strategies for curating personal digital content, including management, personalization, organization, and maintenance of digital content; e-mail management; and workflow	3.K2
British Columbia Computer Studies 10	1	10	Computer Studies • computer hardware, peripherals, internal and external components, and standards • distinctions between software types, cloud-based and desktop applications • operating system shortcuts and command line operations • preventive maintenance of hardware and software • computer security risks • hardware and software troubleshooting • wired and wireless computer networking • evolution of technology and the impact on traditional models of computing • risks and rewards associated with big data, multi-device connectivity, and the Internet of Things • principles of computational thinking • computer programming concepts and constructs • planning and writing simple programs • code maintenance and documentation	3.P, 3.K1, 3.K2, 3.K5, 3.S1, 3.S2
British Columbia Drafting 10	1	10	Drafting • modelling using computer-aided design (CAD) and computer-aided manufacturing (CAM) software • coding for creating 3D representations of design solutions • equipment and tools for manual and computer-aided drafting	3.K1
British Columbia	1	10	Web Development	3.K4,

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Web Development 10			• relationship between web structure and content (HTML), style and design, cascading style sheet (CSS) functionality and interactivity (JavaScript) • benefits and drawbacks of online websites and content management system (CMS) options • website design planning tools • HTML text editing and graphical user interface (GUI) tools • user interface (UI) and user experience (UX) • World Wide Web Consortium (W3C) standards and responsive and optimized web design • domain and hosting options • accessibility and functionality in web design • writing for the web • security and privacy implications • database creation and management	3.K5, 3.S1
British Columbia Computer Information Systems 11	1	11	Computer Information Systems • evolution of computer technology, including hardware, software, networks, and the Internet • lab procedures and tool use • internal and external components of computer systems, including peripheral devices • computer troubleshooting, including the incorporation of digital tools to aid and assist with research and diagnostics • computer assembly and disassembly best practices • ongoing preventive maintenance, including data security and online/offline backup solutions • installation and configuration of operating systems • proprietary versus open-source applications • software installations and configurations • use of correct terminology to describe the units, rates, and encoding of data communication • network planning, setup, and diagnostics • key aspects of network protocols and standards • laptops and mobile device technology	3.P, 3.K1, 3.K3, 3.K4, 3.K5, 3.S1, 3.S2

Source	Page #	Grade(s)	Text from Document	Grade Assigned
British Columbia Computer Programming 11	1	11	Computer Programing • structures within existing code • ways to modify existing code to meet a particular purpose • strategies to predict effects of code modification • programming language constructs to support input/output, logic, decision structure, and loops • requirements of a problem statement • ways to transform requirements into algorithms • translation of design specifications into source code • tools to aid in the development process • pre-built libraries and their documentation • inline commenting to document source code • use of test cases to detect logical or semantical errors	3.P, 3.K1, 3.K3, 3.K4, 3.K5, 3.S1, 3.S2
British Columbia Digital Communications 11	1	11	Digital Communications • digital tools to communicate and solicit information • impacts of social media in global communications • impacts on language use of online of technology • issues in digital communication • digital communication risks • technology to support collaboration and interaction with others	3.P, 3.K2, 3.K3, 3.K4, 3.K5, 3.S1
British Columbia Drafting 11	1	11	Drafting • drawing management and problem solving using computer-assisted design (CAD) software	3.P
British Columbia Coding for Manufacturing 12	1	12	Coding for Manufacturing • coding as an analytical process • basic movements in coding language • file conversion from 3D model to code for machine processing • geometric construction in creating drawings and images • design visualization through computer modelling • machining standards for working with different materials	3.P, 3.K1, 3.K2, 3.K3, 3.K4

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			• tooling and tool motion for computer numerical control (CNC) equipment • use of code in creating a product through a reproducible means • multiple platforms for manufacturing product • processes for creating a working part or product that is easily replicated from a working drawing • how manufacturing relates to industrial production • how to model 2D and 3D designs using industry standard computer programs	
British Columbia Computer Information Systems 12	1	12	Computer Information Systems • 2D, 3D, audio, and video digital media editing tools, including paid, freeware, open source, and cloudbased solutions • principles of 2D graphic design • tools and techniques for image manipulation • methods and principles of 3D graphic design • methods for digital animation • methods for 3D modelling • digital sound and audio data compression • digital animation techniques • computer-assisted versus computer-generated • desktop video production • principles of user-centred design	3.P, 3.K1, 3.K2, 3.K3, 3.K4
British Columbia Computer Programing 12	1	12	Computer Programing • problem decomposition • advanced programming structures • standardized source code documentation • self-documenting code • collaboration tools for programming • elements for interface design that is efficient and intuitive for the user • error handling • debugging tools • management of complexity • uses of pre-built data structures • bug reports and feature requests from users	3.P, 3.K1, 3.K3, 3.K4
British Columbia Digital Media Development 12	1	12	Digital Media Development • 2D, 3D, audio, and video digital media editing tools, including paid, freeware, open source, and cloudbased solutions	3.P, 3.K1, 3.K2, 3.K3,

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			• principles of 2D graphic design • tools and techniques for image manipulation • methods and principles of 3D graphic design • methods for digital animation • methods for 3D modelling • digital sound and audio data compression • digital animation techniques • computer-assisted versus computer-generated • desktop video production • principles of user-centred design	3.K4
British Columbia Drafting 12	1	12	Drafting • computer-aided design (CAD) programs and other graphic software management • modifying existing geometrical design using CAD software • 3D modelling using advanced modelling techniques • file conversion between CAD and other applications	3.K1, 3.K4
British Columbia Media Design 12	1	12	Media Design • media technologies • image-development strategies and image manipulation in order to create, respond to, or challenge design problems	3.P, 3.K1, 3.K2, 3.K3
Manitoba Curriculum Intro ICT Learning Experiences	4-5	4-6	ICT.3: Students are introduced to the email software application or web-based email used by the school, while participating in a riddle activity to learn about each other. ICT.8: In this introductory Internet learning experience, students develop their understanding of the Internet, learn what they can expect to find on the World Wide Web, and learn how to search online effectively for pertinent, valid, and reliable information.	3.K2, 3.K2
Manitoba Curriculum Senior Computer Science (20S, 30S, 40S)	11	10-12	Specific Learning Outcomes (SLO)- 1.3 Ethical Behaviour 1.3.1: Discuss the effects of computer crime, hacking, plagiarizing code, software piracy, virus distribution, and willful destruction of data. 1.3.2: Demonstrate responsible security practices while using computers and networks.	3.P, 3.K2, 3.K3, 3.K5, 3.S1, 3.S2
Manitoba Curriculum	16	10-12	SLO- 4.1 Programming Standards and Conventions	3.K3, 3.K4

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Senior Computer Science (20S, 30S, 40S)			4.1.1 Set up a directory and file management system for storage, retrieval, and portability. 4.1.2 Explain the need for programming standards and conventions. 4.1.3 Use accepted programming standards and conventions for – documentation – style and readability – naming of variables, subprograms, etc.	
Manitoba Curriculum Senior Computer Science (20S, 30S, 40S)	17	10-12	SLO- 4.2 Programming: Data Structures 4.2.2 Identify and use appropriate data types. 4.2.3 Obtain input from the program user. 4.2.4 Identify truncation and roundoff errors related to data types. 4.2.5 Format numeric and textual output. 4.2.6 Use string data for input, concatenation, and output of text. 4.2.7 Describe the relationship between each data type and the amount of memory it uses.	3.K1, 3.K3, 3.K4
Manitoba Curriculum Senior Computer Science (20S, 30S, 40S)	18	10-12	SLO -4.4 Programming: Debugging 4.4.1 Differentiate between compile time errors, run-time errors, and logic errors. 4.4.2 Detect and correct compile-time errors, run-time errors, and logic errors. 4.4.3 Locate errors by hand tracing and by using debugging tools.	3.K1, 3.K3, 3.K4, 3.S1
New Brunswick Media Studies 120	8	12	Media Studies Curriculum 3.2 use media to communicate an idea, adapting it for a variety of audiences and purposes	3.K2
Newfoundland and Labrador GCOTE Framework Document	16	K-2	General Curriculum Outcomes (GCO)- 2: Technological Systems [2.101] operate components of a variety of familiar technological systems [2.102] manage technological resources when engaged in an activity [2.103] operate familiar control systems [2.104] recognize and identify common technological systems, and determine what they do and what keeps them working	3.P
Newfoundland and Labrador GCOTE Framework Document	16	3-5	General Curriculum Outcomes (GCO)- 2: Technological Systems [2.201] operate a representative range of technological systems [2.202] manage technological resources to improve the performance of a system [2.203] operate logic and control systems	3.P, 3.K1, 3.S2

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			[1.204] identify the functions and components of common technological systems	
Newfoundland and Labrador GCOTE Framework Document	22	3-5	General Curriculum Outcomes (GCO)-5: Technological Responsibility [5.203] demonstrate increasing awareness of the need to take proper measures to manage technological risk	3.K5
Newfoundland and Labrador GCOTE Framework Document	17	6-8	General Curriculum Outcomes (GCO)- 2: Technological Systems [2.301] operate, monitor, and adjust a representative range of technological systems [2.302] manage a representative range of technological systems [2.303] employ programming logic and control systems to sense, switch, and regulate events and processes [2.304] classify technological systems, using one or more schema, and determine their operational components and parameters (e.g., schema include general make-up, underlying principles and purposes, and sub-systems) [2.305] diagnose and repair malfunctioning systems	3.P, 3.K1, 3.S2
Newfoundland and Labrador GCOTE Framework Document	23	6-8	General Curriculum Outcomes (GCO)-5: Technological Responsibility [5.302] develop personal rules of conduct that ensure healthy and safe practices [5.303] develop and demonstrate risk-management strategies for a variety of technological activities	3.P, 3.S1, 3.S2
Newfoundland and Labrador GCOTE Framework Document	17	9-12	General Curriculum Outcomes (GCO)- 2: Technological Systems [2.401] operate, monitor, and adjust technological systems of increasing complexity [2.402] manage technological systems of increasing complexity [2.403] modify programming logic and control systems to optimize the behaviour of systems [2.404] deconstruct complex technological systems into their simpler systems and components [2.405] troubleshoot and maintain systems	3.P, 3.S1
Newfoundland and Labrador GCOTE Framework Document	23	9-12	General Curriculum Outcomes (GCO)-5: Technological Responsibility [5.402] demonstrate responsible leadership in employing health and safety rules and standards [5.403] demonstrate responsible leadership in taking proper measures to manage current and future technological risk	3.S1

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Northwest Territories Literacy and ICT Across the Curriculum	53	K-3	INQUIRY COMPONENT. GATHERING AND MAKING SENSE -can find information from electronic and media sources with lots of help -attends to source, author/creator of information by recording titles, URLs, and names -collects/creates primary data with simple devices such as digital cameras	3.K3
Northwest Territories Literacy and ICT Across the Curriculum	56	4-6	INQUIRY COMPONENT. ETHICS and RESPONSIBILITY -applies the rules about internet safety (username and password privacy) -understands healthy uses of ICT (eg. learning, sharing ideas, building relationships…) and unhealthy uses (eg. cyberbullying, hatred, hurting reputations…)	3.K2
Northwest Territories Literacy and ICT Across the Curriculum	56	4-6	INQUIRY COMPONENT. GATHERING AND MAKING SENSE -discovers the subtopics of the inquiry using ICTs that show related searches and questions and word clouds; decides whether to narrow or broaden the inquiry question	3.K3
Northwest Territories Literacy and ICT Across the Curriculum	60	7-9	INQUIRY COMPONENT. COLLABORATION -sometimes collaborates with others from a distance to pose questions, share and pool expertise, bridge ingenuity gaps, and determine risks using email, wikis, blogs, conferencing technologies, and other social media	3.K2, 3.K5
Northwest Territories Literacy and ICT Across the Curriculum	63	10-12	INQUIRY COMPONENT. PRODUCING TO SHOW UNDERSTANDING -uses non-sequential representations with hyperlinks, layered graphics, multiple spreadsheets, simulations, or virtual realities that will engage a particular audience	3.K3
Northwest Territories Literacy and ICT Across the Curriculum	64	10-12	INQUIRY COMPONENT. COLLABORATION -assesses, in collaborative settings, the value, purpose, and ethics of sharing community generated primary data on media sharing sites -makes individual/group primary data available for sharing with an online community by uploading it to a media sharing site under a “some rights reserved” type copyright license	3.K2, 3.K4
Nova Scotia ICT Curriculum	18-19	4-6	BASIC OPERATIONS & CONCEPTS	3.K2, 3.K5

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			BOC 6.3 (RELATES TO 3.3) demonstrate effective use of computer keyboards, mice, and other input devices to produce final documents and presentations BOC 6.4 (RELATES TO 3.4, 3.4) maintain their electronic files and folders on the computer system and network BOC 6.5 (RELATES TO 3.4) safely exchange electronic mail and attachments with students and others selected by the teacher for curriculum research and communication purposes, with teacher supervision	
Nova Scotia ICT Curriculum	18-19	4-6	SOCIAL, ETHICAL, & HUMAN ISSUES SEHI 6.3 (RELATES TO 3.2) begin to identify social and ethical issues associated with the global access and distribution of information; and to develop concern for the accuracy of information, personal privacy and safety when in electronic environments such as Internet, with the assistance of the teacher	3.K5
Nova Scotia ICT Curriculum	18-19	4-6	PRODUCTIVITY PTS 6.1 (RELATES TO 3.1) select from a range of media and software to best represent the content and purpose of their learning with growing independence PTS 6.2 (RELATES TO 3.2) identify and describe different ways in which information available for use at this level can be created, stored, used, represented, and transmitted with growing independence PTS 6.4 (RELATES TO 3.1. 3.3) conduct simple research, then plan and create a representation of their learning, such as a storyboard, a multimedia presentation, an audio recording, a web page, or a print publication independently and in collaboration with others PTS 6.5 (RELATES TO 3.4) record and edit still imaged, moving images, and sound to represent their learning to particular audiences, with teacher assistance PTS 6.6 (RELATES 3.1, 3.3) create navigable web pages and other forms of multimedia which incorporate text, still and moving images, and links to external resources independently and in collaboration with others PTS 6.7 (RELATES TO 3.1, 3.3) create simple databases of information which they query to discover information patterns and relationships during research	3.K2
Nova Scotia ICT Curriculum	18-19	4-6	RESEARCH, PROBLEM SOLVING, & DECISION MAKING RPSD 6.2 (RELATES TO 3.2, 3.3) use appropriate technological tools for concept mapping, problem solving, observation, measurement, calculation, graphing and charting to explore concepts under study	3.K2

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Nova Scotia ICT Curriculum	20-21	7-9	BASIC OPERATIONS & CONCEPTS BOC 9.1 (RELATES TO 6.1) operate a wide variety of school media, computer, and other educationally appropriate equipment for learning, communication, and the representation of their learning, independently and safely with teacher supervision BOC 9.2 (RELATES TO 6.2) use and create information texts in a range of media, using specialized text features of those media to support the communication, with teacher assistance BOC 9.3 (RELATES TO 6.3) demonstrate comfort with keyboarding and manipulation of computer input and peripheral devices as they work BOC 9.4 (RELATES TO 6.4) manage their electronic files and correspondence efficiently BOC 9.5 (RELATES TO 6.1, 6.2, 6.3, 6.4) from a range of resource options, knowledgeably select, manage, and use technological resources to solve curriculum problems and enhance their learning, with teacher guidance BOC 9.7 (RELATES TO 6.7) work safely as they use ICT, applying basic troubleshooting techniques to assess equipment and software problems that affect their use of ICT; then provide anecdotal information which may be of help to maintenance technicians	3.K2
Nova Scotia ICT Curriculum	20-21	7-9	PRODUCTIVITY PTS 9.4 (RELATES TO 6.5, 6.6) create and manipulate sound, images and video, using digital equipment and computer-based editing, to represent their learning for particular audiences and purposes, independently	3.K2
Nova Scotia ICT Curriculum	22-23	10-12	BASIC OPERATIONS & CONCEPTS 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	3.K2, 3.S1
Nova Scotia ICT Curriculum	22-23	10-12	SOCIAL, ETHICAL, & HUMAN ISSUES 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	3.P

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Nova Scotia ICT Curriculum	22-23	10-12	PRODUCTIVITY 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 P TS 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	3.K2
Nova Scotia ICT Curriculum	22-23	10-12	COMMUNICATION 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 12.5 (RELATES TO 9.1 – 9.3) use multimedia hardware and authoring software to develop non-linear, interactive presentations	3.K1, 3.K2
Ontario Health and Physical Education	102	9	Physical Education Personal Safety and Injury Prevention C1.2 demonstrate an understanding of the benefits and risks of using electronic communication technologies (e.g., easy access to useful information and entertainment but also to harmful or undesirable information and entertainment, such as pornography; enhanced ability to stay in touch with friends but also increased possibility of exposure to sexual predators, bullying, and sexting; ability to communicate one's thoughts and creative efforts to the rest of the world but also increased potential for loss of privacy), and describe strategies that they can apply to ensure their safety while using these technologies [IS, CT]	3.K2, 3.K5
Ontario Communications Technology	55	10	C1. describe the impact of communications media technologies and activities on the environment and identify ways of reducing their harmful effects	3.K5
Ontario Computer Studies – Introduction to Computer Studies	34	10	*Overall Expectations:* A1. describe the functions of different types of hardware components, and assess the hardware needs of users; A2. describe the different types of software products, and assess the software needs of users;	3.P, 3.K1, 3.K2, 3.K3, 3.S1, 3.S2

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			A3. use the basic functions of an operating system correctly; A4. demonstrate an understanding of home computer networking concepts; A5. explain the importance of software updates and system maintenance to manage the performance and increase the security of a computer.	
Ontario Computer Studies – Introduction to Computer Studies	36	10	B1. describe fundamental programming concepts and constructs; B2. plan and write simple programs using fundamental programming concepts; B3. apply basic code maintenance techniques when writing programs.	3.K1, 3.K3, 3.K4
Ontario Computer Technology	43/58	10	Computer Technology (TEJ1O) This exploratory course introduces students to concepts and skills in computer technology, which encompasses computer systems, networking, interfacing, and programming, as well as electronics and robotics. Students will develop an awareness of related environmental and societal issues, and will begin to explore secondary and postsecondary pathways leading to careers in the field. *Overall Expectations:* A1. identify and describe the functions of, as well as important advances related to, electronic and computer components; A2. demonstrate a basic understanding of computer networks and their components; A3. demonstrate a basic understanding of binary numbers and digital logic	3.P, 3.K1, 3.K2, 3.K3, 3.K5, 3.S1, 3.S2
Ontario Computer Technology	59	10	B1. install and configure the hardware and operating system of a workstation, and use file-management techniques effectively; B2. construct and test simple interfaces and other electronic circuits; B3. assemble and configure a simple computer network; B4. install and use a variety of software; B5. apply fundamental programming concepts to develop a variety of simple programs, including a program to control an external device.	3.P, 3.K1, 3.K3, 3.K4
Ontario Computer Technology	61	10	C1. identify harmful effects of the widespread use of computers and associated technologies on the environment, as well as agencies that reduce these	3.K5

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			effects; C2. identify effects of the widespread use of computers and associated technologies on society.	
Ontario Technology Education	49	11	*Overall Expectations:* A2. demonstrate an understanding of different types of equipment and software and how they are used to perform a range of communications technology operations and tasks; A4. demonstrate an understanding of and apply the interpersonal and communication skills necessary to work in a team environment.	3.K1, 3.K2
Ontario Technology Education	51	11	B2. apply a design process or other problem-solving processes or strategies to meet a range of challenges in communications technology; B3. create productions that demonstrate competence in the application of creative and technical skills and incorporate current standards, processes, formats, and technologies.	3.K3
Ontario Interdisciplinary Studies: Information and Citizenship	16	12	This course explores Canadian and international law and policy regarding the use of information in society. Students will analyse historical and contemporary sources from a variety of disciplines to determine specific legal issues arising from society's use of information. They will investigate criminal laws and procedures regarding privacy and security, including those involving patents, copyright, and intellectual property. They will also examine the access to and creation, storage, and use of information for private and public purposes, and will apply methods of inquiry and research used by legal practitioners to solve problems.	3.K5
Prince Edward Island Information Technology Communication 401	35	10-12	CL3.1: Statistics show that the Windows operating system is used by approximately 91% of users (June, 2008). Discuss the implications for someone who is considering using a MAC or Linux operating system on a home computer to complete projects for work or school. CL3.2: Research the founding of the Linux operating system and the principles upon which it has been developed. What are some different names of current Linux operating systems? Report findings.	3.P, 3.K1, 3.K3
Prince Edward Island Information Technology Communication 401	43	10-12	CL7.4 Is it ethical to access a private wireless network that has been left open without security (hot spot)?	3.K5

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			CL7.5 Research recent security/privacy concerns about an online service such as Facebook or Second Life. Report findings.	
Prince Edward Island Information Technology Communication 401	47	10-12	CL8.2: Examine the schools Internet "Acceptable Use Policy" to discuss security measures that exist on the schools' computer network. Identify ways that computer ethics or crime might come into play within the school context. Have students suggest possible penalties for committing certain types of offenses eg. trying to find out others' passwords, accessing forbidden sites on the Internet, damaging equipment or stealing mouse balls, changing passwords of students who might forget to log off the system, sending e-mail under the name of the person who forgot to log off, sending chain letters, sending unwanted or off-coloured e-mails to individuals within the school, trying to gain unauthorized access to other areas within the network.	3.K5, 3.S1, 3.S2
Prince Edward Island Information Technology Communication 401	57	10-12	IT1.1: Research the development of the Internet and express an opinion as to why the Internet has gained such unexpected popularity. IT1.2: Identify local Internet Service Providers (ISP). IT1.3: Research the continued growth in Internet use and services. Report ways in which telecommunication companies have ensured that traffic growth can be accommodated.	3.K2
Prince Edward Island Information Technology Communication 401	59	10-12	IT2.4: Research the term Web 2.0. Identify Internet tools that would fall into the category of Web 2.0. Is there a Web 3.0? How are these tools different?	3.K1, 3.K2, 3.K3
Prince Edward Island Introductory Computer Studies CMP521A	23	10-12	PR3.1 The most important aspect of computer programming is the planning of the program. Emphasis should be placed on correct planning of a program. With this is mind, problems should be presented to the students with the aim of planning solutions to these problems. Model the solution to these problems, demonstrating how the solution can be arrived at by using the six steps to structured programming.	3.S1, 3.S2
Prince Edward Island Introductory Computer Studies CMP521A	27	10-12	PR5.4 Assess students' algorithms for completeness and structure	3.K1
Prince Edward Island Introductory Computer Studies CMP521A	30	10-12	PR6: develop a program using keywords, commands, statements, operators, subroutines and functions ... continued	3.K1

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Prince Edward Island Introductory Computer Studies CMP521A	57	10-12	IP1.1: Use notepad, an online code generator, NVU Kompozer or Dreamweaver split screen to examine HTML tags and attributes. IP1.2: Provide HTML code where tags have been opened and closed incorrectly. Identify and correct errors.	3.K3, 3.K4
Prince Edward Island Introductory Computer Studies CMP521A	65	10-12	IP6.1: Identify ten considerations for web page design that allow accessibility. IP6.2: Research a listing of HTML tags or attributes that are no longer used or that will soon be replaced. IP6.3: Test a web page design for accessibility. Appraise the extent to which HTML standards have been applied to this site	3.K3, 3.K4
Prince Edward Island Introductory Computer Studies CMP521A	81	10-12	LY1.2 Digital encoding is used for all electronic media. Research an aspect of encoding. i.e.: sound (wave to digital format), images (colour to digital format), laser, DVD, IP addressing, etc.)	3.K1, 3.K3
Prince Edward Island Introductory Computer Studies CMP521A	85	10-12	LY4.4 Research recent security/privacy concerns and rights about online services such as wiki, blog, or collaborative documents.	3.K2, 3.K5
Québec Curriculum: Preschool / Elementary Cross-curricular Competencies	29	1-6	Key Features: To evaluate his/her use of information and communications technologies. To recognize his/her successes and difficulties. To identify the limitations of the technology employed in a given situation. To identify ways to improve his/her use of ICT.	3.S1, 3.S2
Québec Curriculum: Cycle 1 Cross-curricular Competencies	47	7-9	Key Features: To evaluate his/her use of information and communications technologies. To recognize his/her successes and difficulties. To identify the limitations of the technology employed in a given situation. To identify ways to improve his/her use of ICT.	3.S1
Québec Curriculum: Cycle 2 Cross-curricular Competencies	Ch 3, p. 15	10-11	In any case, secondary schools have a responsibility to build on students' learning with regard to these technologies, while teaching them to use them properly. The school should enable students to develop sufficient competence to use them in their learning. In addition, they must foster the students' respect for ethical standards in their use of ICT and ensure that the educational advantages of ICT are reflected in the intellectual, methodological, social and personal development of every student.	3.S1

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Québec Curriculum: Cycle 2 Cross-curricular Competencies	Ch. 3, p. 16	10-11	Key Features: To evaluate his/her use of information and communications technologies. To recognize his/her successes and difficulties. To identify the limitations of the technology employed in a given situation. To identify ways to improve his/her use of ICT.	3.S1
Québec Curriculum: Preschool / Elementary Cross-curricular Competencies	29	1-6	Composantes de la competence: Évaluer l'efficacité de l'utilisation de la technologie. Reconnaître ses réussites et ses difficultés. Cerner les limites de la technologie utilisée dans une situation donnée. Chercher les améliorations possibles dans sa manière de faire.	3.S1, 3.S2
Québec Curriculum: Cycle 1 Cross-curricular Competencies	47	7-9	Composantes de la competence: Évaluer l'efficacité de l'utilisation de la technologie. Reconnaître ses réussites et ses difficultés. Cerner les limites de la technologie utilisée dans une situation donnée. Chercher les améliorations possibles dans sa manière de faire.	3.S1
Québec Curriculum: Cycle 2 Cross-curricular Competencies	Ch 3, p. 15	10-11	Dans tous les cas, l'école secondaire a la responsabilité de tirer parti de ce qui est maîtrisé au regard des technologies, tout en amenant les élèves à en faire bon usage. Elle doit permettre à chacun de développer la compétence nécessaire pour y recourir adéquatement dans ses apprentissages. En outre, on attend de l'école qu'elle cultive le respect des normes éthiques à cet égard et que la valeur ajoutée des TIC dans le développement intellectuel, méthodologique, social et personnel de chaque élève y soit manifeste.	3.S1
Québec Curriculum: Cycle 2 Cross-curricular Competencies	Ch. 3, p. 16	10-11	Composantes de la competence: Évaluer l'efficacité de l'utilisation de la technologie. Reconnaître ses réussites et ses difficultés. Cerner les limites de la technologie utilisée dans une situation donnée. Chercher les améliorations possibles dans sa manière de faire.	3.S1
Saskatchewan Computer Science 20	22	11	**1.4** Demonstrate an understanding of the basic workings of microcomputer hardware. Students will be able to do the following things: · describe the proper procedures and precautions to work safely inside the case of a computer · describe the input and output devices of the system · properly disconnect and ground a computer, remove the cover, locate and describe the function of · CPU chip	3.P, 3.K1, 3.K4

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			· power supply · storage devices · memory chips · expansion slots and boards · remove a board from a computer and re-install it. (TL)	

Competency 4: Understanding the digital environment – economic aspects

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Alberta Curriculum Information and Communication Technology	13	4-6	Division 2: F3: Students will demonstrate a moral and ethical approach to the use of technology. 2.1 comply with the acceptable use policy of the school and school authority for Internet and networked services, including software licensing agreements 2.5 respect the privacy and products of others 2.7 comply with copyright legislation	4.P
Alberta Curriculum Information and Communication Technology	13	10-12	Division 4: F.2 - Students will understand the role of technology as it applies to self, work and society. -Specific Outcomes: 4.2 analyze how technological innovations and creativity affect the economy 4.6 demonstrate an understanding of the basic principles and issues of e-commerce, including such topics as security and privacy, marketing, and implications for governments, businesses and consumers alike	4.P, 4.K1, 4.K2, 4.K3, 4.K4
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 5 of pdf document	6-7	Digital Literacy Internet Safety: Including privacy and security (secured connections, passwords, personal information), digital footprint and dossier, cyberbullying, online scams, and cybercrimes • elements of digital citizenship: digital self image, creative credit and copyright, relationships and copyright, cyberbullying, legal and ethical issues.	4.P, 4.K3, 4.K4
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 6 of pdf document	6-7	Media Arts • issues in ethical media practices, including cultural appropriation, moral copyright, reproduction, and privacy	4.P
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 9 of pdf document	8	Digital Literacy: • elements of digital citizenship: digital self image, creative credit and copyright, relationships and copyright, cyberbullying, legal and ethical issues.	4.P
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 10 of pdf document	8	Media Arts • issues in ethical media practices, including cultural appropriation, moral copyright, reproduction, and privacy	4.P
British Columbia	1	10	Computer Studies	4.K2

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Computer Studies 10			• risks and rewards associated with big data, multi-device connectivity, and the Internet of Things	
British Columbia Web Development 10	1	10	Web Development • copyright, creative commons, and fair use protocols for media and content • database creation and management	4.P
British Columbia Digital Communications 11	1	11	Digital Communications • digital tools to communicate and solicit information • influences of digital marketing in online content creation and curation	4.K3
British Columbia Media Design 11	1	11	Media Design • ethical, moral, and legal considerations associated with using media arts technology for image, video, and sound development	4.P
British Columbia Computer Information Systems 12	1	12	Computer Information Systems • 2D, 3D, audio, and video digital media editing tools, including paid, freeware, open source, and cloudbased solutions	4.P
British Columbia Digital Media Development 12	1	12	Digital Media Development • 2D, 3D, audio, and video digital media editing tools, including paid, freeware, open source, and cloudbased solutions	4.P
British Columbia Media Design 12	1	12	Media Design • ethical, moral, and legal considerations of using media arts technology to reproduce and distribute images, and how to deal with these issues in the design process • ways that innovative technologies reflect the complexity of social, environmental, and ethical concerns of the 21st century	4.P
Manitoba Curriculum Senior Computer Science (20S, 30S, 40S)	11	10-12	Specific Learning Outcomes (SLO)- 1.3 Ethical Behaviour 1.3.1: Discuss the effects of computer crime, hacking, plagiarizing code, software piracy, virus distribution, and willful destruction of data.	4.P, 4.K3, 4.K4
New Brunswick Media Studies 120	6	12	Media Studies Curriculum 1.2 employ critical literacy skills as media consumers	4.P, 4.K2
Newfoundland and Labrador	20	3-5	General Curriculum Outcomes (GCO)- 4: Technology and Careers	4.P, 4.K2

Source	Page #	Grade(s)	Text from Document	Grade Assigned
GCOTE Framework Document			[[4.202] investigate local products and services to determine how they were designed, and their impact on the local economy	
Newfoundland and Labrador GCOTE Framework Document	19	6-8	General Curriculum Outcomes (GCO)- 3: History and Evolution of Technology [3.305] account for effects of cultural diversity on technological solutions • examine the effects of culture on traditional products, and vice versa • explore how products are designed differently for different markets • apply their understanding of cultural preferences when developing technological solutions	4.P, 4.K2, 4K3
Northwest Territories Literacy and ICT Across the Curriculum	53	K-3	INQUIRY COMPONENT. GATHERING AND MAKING SENSE -before notes are taken, asks if information is real and useful or if it is just "made up" or an advertisement	4.P, 4.K1, 4.K2
Northwest Territories Literacy and ICT Across the Curriculum	56	4-6	INQUIRY COMPONENT. ETHICS and RESPONSIBILITY -learns from the copyright license what permissions the author gives for the use of his/her words, pictures, sounds, and videos -gives credit to the authors/creators of the work used INQUIRY COMPONENT. SOCIAL IMPLICATIONS -can tell about how ICT is used at home, school, and the community for recreation, communication, education, sales, and health care	4.P, 4.K2, 4.K3, 4.K4
Northwest Territories Literacy and ICT Across the Curriculum	59	7-9	INQUIRY COMPONENT. GATHERING AND MAKING SENSE -uses criteria to analyze the information for its relevancy, context, validity (logical, real-world), accuracy, authorship, currency (general acceptance and use of the source), credibility (trustworthiness), and reliability (dependableness for future use) -learns what permission is given by the author to use his/her work and give credit to him/her	4.P
Northwest Territories Literacy and ICT Across the Curriculum	60	7-9	INQUIRY COMPONENT. ETHICS and RESPONSIBILITY -follows the school boards acceptable–use of ICT policy -learns how to deal fairly with the words, pictures, sounds, and videos of others and to look for the author's intended use of the work as described in a license -gives credit to the authors of the work use	4.P, 4.S2
Northwest Territories Literacy and ICT Across the Curriculum	64	10-12	INQUIRY COMPONENT. ETHICS and RESPONSIBILITY -applies the school division's acceptable use of ICT policy to digital work -gives credit for the words, ideas, pictures, sounds, and videos of others	4.P, 4.K2, 4.K3, 4.K4 4.S2

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			-knows that permission must be gained and credit given for the use of other's words, pictures, sounds, music, and videos -learns how to deal fairly with the intellectual and artistic property of others by reading the author's intended use of the work described in the license INQUIRY COMPONENT. SOCIAL IMPLICATIONS -analyzes the advantages and disadvantages of ICT use in society -analyzes the trend of sharing information in a socially networked world INQUIRY COMPONENT. COLLABORATION -assesses, in collaborative settings, the value, purpose, and ethics of sharing community generated primary data on media sharing sites -makes individual/group primary data available for sharing with an online community by uploading it to a media sharing site under a "some rights reserved" type copyright license -helps the group understand the extent of the "fair dealing" rights the public have to use group data placed online by using Sec. 29 of the Canadian Copyright Act	
Nova Scotia ICT Curriculum	16-17	K-3	SOCIAL, ETHICAL, & HUMAN ISSUES SEHI 3.5 include in their own work the copyrighted materials of others only when permission to do so has been received, with teacher or library staff assistance SEHI 3.6 follow the Public School Program Network Access and Use Policy	4.P
Nova Scotia ICT Curriculum	18-19	4-6	SOCIAL, ETHICAL, & HUMAN ISSUES SEHI 6.2 (RELATES TO 3.2) demonstrate respect for the privacy and intellectual property of others, maintain their personal privacy and safety SEHI 6.7 (RELATES TO 3.5) include in their own work the copyrighted materials of others only when permission to do so has been received SEHI 6.8 (RELATES TO 3.6) follow the Public School Program Network Access and Use Policy	4.P
Nova Scotia ICT Curriculum	20-21	7-9	SOCIAL, ETHICAL, & HUMAN ISSUES SEHI 9.4 (RELATES TO 6.2, 6.7, 6.8) demonstrate an understanding of, and a commitment to, accuracy, ethical behaviour, and personal privacy and safety as they create and distribute information about themselves, others, and curriculum topics under study SEHI 9.6 (RELATES TO 6.8) follow the Public School Program Network Access and Use Policy	4.P, 4.K2, 4.K3, 4.K4

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Ontario Computer Technology	54	10	D2. demonstrate an understanding of and adhere to legal requirements and ethical standards relating to the communications technology industry;	4.P
Ontario Interdisciplinary Studies: Analysing Current Economic Issues	92	12	*C*1.The Firm and Market Structures: demonstrate an understanding of markets and theories of the firm (FOCUS ON: Cause and Effect; Stability and Variability)	4.P, 4.K1, 4.K2
Ontario Interdisciplinary Studies: Information and Citizenship	16	12	This course explores Canadian and international law and policy regarding the use of information in society. Students will analyse historical and contemporary sources from a variety of disciplines to determine specific legal issues arising from society's use of information. They will investigate criminal laws and procedures regarding privacy and security, including those involving patents, copyright, and intellectual property. They will also examine the access to and creation, storage, and use of information for private and public purposes, and will apply methods of inquiry and research used by legal practitioners to solve problems.	4.P, 4.K2, 4.K3, 4.K4, 4.S1, 4.S2
Ontario World History since the Fifteenth Century	404	12	*Overall Expectations:* E1. Social, Economic, and Political Context: analyse the significance of various social, economic, and political policies, developments, and ideas in various regions of the world since 1900 (FOCUS ON: Historical Significance; Cause and Consequence)	4.P, 4.K1
Prince Edward Island Information Technology Communication 401	43	10-12	CL7.5 Research recent security/privacy concerns about an online service such as Facebook or Second Life. Report findings. CL7.6 Prepare a short report for a younger relative (or his or her parents) explaining how to safely use online social networking sites. CL7.9 Demonstrate ethical behaviour in regards to copyright laws and due diligence in regards to online privacy and personal safety.	4.S2
Prince Edward Island Information Technology Communication 401	47	10-12	CL8.2: Examine the schools Internet "Acceptable Use Policy" to discuss security measures that exist on the schools' computer network. Identify ways that computer ethics or crime might come into play within the school context. Have students suggest possible penalties for committing certain types of offenses eg. trying to find out others' passwords, accessing forbidden sites on the Internet, damaging equipment or stealing mouse balls, changing passwords of students who might forget to log off the system, sending e-mail under the name of the person who forgot to log off, sending chain letters, sending unwanted or off-coloured e-	4.S2

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			mails to individuals within the school, trying to gain unauthorized access to other areas within the network.	
Prince Edward Island Information Technology Communication 401	57	10-12	IT1.1: Research the development of the Internet and express an opinion as to why the Internet has gained such unexpected popularity. IT1.2: Identify local Internet Service Providers (ISP). IT1.3: Research the continued growth in Internet use and services. Report ways in which telecommunication companies have ensured that traffic growth can be accommodated.	4.P, 4.K1, 4.K2, 4.K3
Prince Edward Island Introductory Computer Studies CMP521A	83	10-12	LY3.1 Prepare a list of questions for a guest speaker on the topics of copyright laws, privacy, and/or ethics. LY3.2 Identify copyright information on a favourite music or video recording. LY3.3 Identify steps involved in registering an original media creation. LY3.4 Research a recent case of copyright infringement. Summarize and report.	4.S1, 4.S2
Québec Curriculum: Preschool / Elementary Broad Areas of Learning	47	1-6	This evolving awareness also applies to their role as consumers. As they come to realize that consumption is never an isolated act, they see the connections between consumption and social and economic life. By observing their reactions to a new product, they can assess the positive and negative influences of members of their family, friends and the media on their behaviour as consumers. They also learn that they must pay for consumer goods they want, and gradually develop strategies of rational consumption. Finally, they become increasingly aware of the need for an equitable distribution of wealth.	4.P, 4.K1, 4.K2, 4.K3, 4.K4
Québec Curriculum: Cycle 1 Broad Areas of Learning	25	7-9	This evolving awareness also applies to their role as consumers. As they come to realize that consumption is never an isolated act, they see the connections between consumption and social and economic life. By observing their reactions to a new product, they can assess the positive and negative influences of members of their family, friends and the media on their behaviour as consumers. They also learn that they must pay for consumer goods they want, and gradually develop strategies of rational consumption. Finally, they become increasingly aware of the need for an equitable distribution of wealth.	4.P, 4.K1, 4.K2, 4.K3, 4.K4
Québec Curriculum: Cycle 2 Broad Areas of Learning	Ch. 2, p. 9	10-11	The school should encourage students to look critically at the consumer behaviour of society and to examine its economic and social repercussions. It should equip them with knowledge, values and attitudes that enable them to become informed consumers and to act responsibly and make	4.P, 4.K1, 4.K2, 4.K3, 4.K4

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			sensible choices as both consumers and producers. It should help them to develop solid critical judgment with regard to advertising. Young people also need to realize that there are close connections between high levels of consumption and the deterioration of their environment, in terms of both the depletion of resources and the resulting wastes, which are disposed of indiscriminately.	
Québec Curriculum: Preschool / Elementary Broad Areas of Learning	47	1-6	Cette prise de conscience va de pair avec celle de son role de consommateur. Il découvre que la consommation n'est jamais un geste isolé et il perçoit ses liens avec la vie sociale et économique. En observant ses réactions à l'égard d'un nouveau produit, il peut constater l'influence positive ou négative qu'exercent les membres de sa famille, ses pairs ou les médias sur ses habitudes de consommation. Il découvre aussi qu'il doit payer les biens qu'il convoite et il s'approprie progressivement des stratégies de consommation rationnelle. Enfin, il perçoit de plus en plus la nécessité de partager équitablement les richesses.	4.P, 4.K1, 4.K2, 4.K3, 4.K4
Québec Curriculum: Cycle 1 Broad Areas of Learning	25	7-9	Cette prise de conscience va de pair avec celle de son role de consommateur. Il découvre que la consommation n'est jamais un geste isolé et il perçoit ses liens avec la vie sociale et économique. En observant ses réactions à l'égard d'un nouveau produit, il peut constater l'influence positive ou négative qu'exercent les membres de sa famille, ses pairs ou les médias sur ses habitudes de consommation. Il découvre aussi qu'il doit payer les biens qu'il convoite et il s'approprie progressivement des stratégies de consommation rationnelle. Enfin, il perçoit de plus en plus la nécessité de partager équitablement les richesses.	4.P, 4.K1, 4.K2, 4.K3, 4.K4
Québec Curriculum: Cycle 2 Broad Areas of Learning	9	10-11	L'école doit amener les élèves à porter un regard critique sur les habitudes de consommation d'une société et à en examiner les répercussions économiques et sociales. Elle doit les outiller sur le plan des savoirs comme sur celui des valeurs et des attitudes pour qu'ils soient en mesure de devenir des consommateurs avertis, d'effectuer des choix judicieux et d'adopter des comportements responsables de producteur et de consommateur. Elle doit notamment les aider à se former un solide jugement critique à l'égard de la publicité qui pousse à la consommation. Les jeunes doivent également réaliser qu'il existe des liens étroits entre cette consommation généralisée et l'altération de leur environnement, tant en ce qui a trait aux ressources qui en sont drainées de façon abusive qu'aux déchets qui, en retour, y sont déversés de façon inconsidérée.	4.P, 4.K1, 4.K2, 4.K3, 4.K4
Saskatchewan	38	12	Unit 1: Software and Hardware - Advanced	4.K2,

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Computer Science 30			1.1 Extend knowledge of the software on the computer system being used in order to: · understand and discuss copyright issues with regard to software use and copying; understand the nature of software upgrades and the version of the software package students are using · understand the importance of backing up data · understand the nature and hazards of viruses and the importance of proper prevention and cure · be knowledgeable about the graphics, sound and multimedia capabilities of the system being used. 1.2 Understand the importance of proper hardware maintenance and where applicable be able to perform cleaning and maintenance procedures on hardware · understand the importance of appropriate storage media care and maintenance · understand the mechanism of a Local Area Network, including servers and clients · be knowledgeable of state of the art technology for micro-computers in the areas of graphics, sound and multimedia capabilities.	4.K3, 4.K4

Competency 5: Understanding personal data regulations and legislation

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Alberta Curriculum Information and Communication Technology	13	7-9	Division 3: F.3 - Students will demonstrate a moral and ethical approach to the use of technology. -Specific Outcomes: 3.2: explain the issues involved in balancing the right to access information with the right to personal privacy 3.6: model and assume personal responsibility for ethical behaviour and attitudes and acceptable use of information technologies and sources in local and global contexts	5.P, 5.K2a, 5.K2c 5.K2d, 5.K2e
Alberta Curriculum Information and Communication Technology	13	10-12	Division 4: F.2 - Students will understand the role of technology as it applies to self, work and society. -Specific Outcomes: 4.6 demonstrate an understanding of the basic principles and issues of e-commerce, including such topics as security and privacy, marketing, and implications for governments, businesses and consumers alike	5.P
British Columbia Computer Studies 10	1	10	Computer Studies • impacts of computers and technology on society and ethical issues of technology use and environmental sustainability • digital literacy and digital citizenship	5.P
British Columbia Web Development 10	1	10	Web Development • security and privacy implications	5.P, 5.K3
British Columbia Digital Communications 11	1	11	Digital Communications • ethics and legalities in digital communication	5.P, 5.K3
British Columbia Social Studies – Law Studies 12	1	12	Social Studies- Law -Understanding legal rights and responsibilities allows citizens to participate more fully in society.	5.P, 5.K1, 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.K3, 5.K4, 5.S1, 5.S2
New Brunswick Law Studies 120	48	12	Contracts 4.1 explain the need for contractual agreements and the process of making a valid contract	5.P, 5.K1 5.K2a, 5.K2b,

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			4.1.3 identify the legal limitations and constraints of contracts for various individuals (e.g. contracts with minors, etc.) 4.2 identify the legal consequences of breach of contract	5.K2c, 5.K2d, 5.K2e
Newfoundland and Labrador GCOTE Framework Document	23	6-8	General Curriculum Outcomes (GCO)-5: Technological Responsibility [5.301] demonstrate an understanding of the nature and purpose of legal and ethical rules and principles	5.P, 5.K1, 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e
Newfoundland and Labrador GCOTE Framework Document	23	9-12	General Curriculum Outcomes (GCO)-5: Technological Responsibility [5.401] demonstrate responsible leadership in employing legal and ethical rules and principles	5.P, 5.S1
Northwest Territories Literacy and ICT Across the Curriculum	64	10-12	INQUIRY COMPONENT. ETHICS and RESPONSIBILITY -understands the need for rules about internet safety such as username and password privacy and careful use of words and ideas INQUIRY COMPONENT. COLLABORATION -assesses, in collaborative settings, the value, purpose, and ethics of sharing community generated primary data on media sharing sites -makes individual/group primary data available for sharing with an online community by uploading it to a media sharing site under a “some rights reserved” type copyright license	5.P, 5.K1 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e
Nova Scotia ICT Curriculum	18-19	4-6	SOCIAL, ETHICAL, & HUMAN ISSUES SEHI 6.2 (RELATES TO 3.2) demonstrate respect for the privacy and intellectual property of others, maintain their personal privacy and safety SEHI 6.3 (RELATES TO 3.2) begin to identify social and ethical issues associated with the global access and distribution of information; and to develop concern for the accuracy of information, personal privacy and safety when in electronic environments such as Internet, with the assistance of the teacher	5.P, 5.K1
Nova Scotia ICT Curriculum	20-21	7-9	SOCIAL, ETHICAL, & HUMAN ISSUES SEHI 9.1 (RELATES TO 6.1, 6.2, 6.3) demonstrate understanding of the nature of technology and its impacts on different societies and environments; using technology, in local and global contexts, with due regard for the legal and human rights of others	5.P, 5.K1
Nova Scotia	22-23	10-12	SOCIAL, ETHICAL, & HUMAN ISSUES	5.K2a,

Source	Page #	Grade(s)	Text from Document	Grade Assigned
ICT Curriculum			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 12.5 (RELATES TO 9.3, 9.4) act responsibly when faced with ethical issues that arise from their use of information and ICT	5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.K3, 5.K5, 5.S1
Ontario Computer Studies – Introduction to Computer Studies	37	10	Introduction to Computer Studies C3. describe legal and ethical issues related to the use of computing devices;	5.P, 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.K3, 5.K5
Ontario Technology Education	54	11	Technology Education D2. demonstrate an understanding of and adhere to legal requirements and ethical standards relating to the communications technology industry;	5.P, 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.K3, 5.K5
Ontario Interdisciplinary Studies: Information and Citizenship	16	12	Information and Citizenship This course explores Canadian and international law and policy regarding the use of information in society. Students will analyse historical and contemporary sources from a variety of disciplines to determine specific legal issues arising from society's use of information. They will investigate criminal laws and procedures regarding privacy and security, including those involving patents, copyright, and intellectual property. They will also examine the access to and creation, storage, and use of information for private and public purposes, and will apply methods of inquiry and research used by legal practitioners to solve problems.	5.P, 5.K1, 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.K3, 5.K5
Prince Edward Island Information Technology Communication 401	43	10-12	CL7.4 Is it ethical to access a private wireless network that has been left open without security (hot spot)? CL7.9 Demonstrate ethical behaviour in regards to copyright laws and due diligence in regards to online privacy and personal safety.	5.P, 5.K1
Prince Edward Island Information Technology Communication 401	47	10-12	CL8.3: News reports appear from time to time regarding people "hacking" into computer systems. Provide one of these articles to your class. Discuss how the crime was committed, damage (if any) to the computer system, how the person(s) was caught, whether they will be criminally	5.P, 5.S1, 5.S2

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			charged, and what is the maximum sentence that one might obtain.	
Prince Edward Island Information Technology Communication 401	59	10-12	IT2.6: Is the use of the Internet a right or a privilege? Discuss. (acceptable use policies, digital divide, protection of minors, access to information, etc.)	5.P,
Prince Edward Island Introductory Computer Studies CMP521A	83	10-12	LY3.1 Prepare a list of questions for a guest speaker on the topics of copyright laws, privacy, and/or ethics. LY3.5 Provide an example of a legal and an ethical issue.	5.P, 5.K1, 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e, 5.S1
Saskatchewan Law 30	166	12	Issues in Civil Law: Privacy Continuing advances in electronic communications technology will result in new issues in civil law regarding privacy of communication, as well as many other consumer and contract law related issues. Canadians will require new public policy and new law to address issues as they arise.	5.P, 5.K2a, 5.K2b, 5.K2c, 5.K2d, 5.K2e
Saskatchewan Communication Media 10, 20, 30	15	10-12	Module 2C: Legal and Ethical Issues (Core) Identify through research the positive and negative aspects of creative, artistic, and intellectual works receiving ownership protection. a. Utilize the Canadian Intellectual Property Office to distinguish between copyright, a patent, and an industrial design and identify some common examples. b. Collect and categorize a number of articles from various sources regarding intellectual property which reflect opposing points of view. c. Explain and support a personal stance on intellectual property.	5.P

Competency 6: Understanding personal data regulations: Controlling the use of personal information

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Alberta Curriculum Information and Communication Technology	13	7-9	Division 3: F.3 - Students will demonstrate a moral and ethical approach to the use of technology. -Specific Outcomes: 3.6: model and assume personal responsibility for ethical behaviour and attitudes and acceptable use of information technologies and sources in local and global contexts	6.K4, 6.S4
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 5 of pdf document	6-7	Digital Literacy Internet Safety: Including privacy and security (secured connections, passwords, personal information), digital footprint and dossier, cyberbullying, online scams, and cybercrimes • elements of digital citizenship: digital self image, creative credit and copyright, relationships and copyright, cyberbullying, legal and ethical issues.	6.P, 6.K3, 6.K4
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 9 of pdf document	8	Digital Literacy: • elements of digital citizenship: digital self image, creative credit and copyright, relationships and copyright, cyberbullying, legal and ethical issues. • strategies for curating personal digital content, including management, personalization, organization, and maintenance of digital content; e-mail management; and workflow	6.P, 6.K3, 6.K4, 6.S1, 6.S2, 6.S4
British Columbia Computer Studies 10	1	10	Computer Studies • digital literacy and digital citizenship	6.P
British Columbia Digital Communications 11	1	11	Digital Communications • digital tools to communicate and solicit information • impacts of social media in global communications • impacts on language use online of technology • digital communication risks • ethics and legalities in digital communication • technology to support collaboration and interaction with others	6.P, 6.K4, 6.S4
New Brunswick Media Studies 120	8	12	Media Studies Curriculum 3.1. justify their positions and respect the positions of others	6.S4
Newfoundland and Labrador GCOTE Framework Document	22	3-5	General Curriculum Outcomes (GCO)-5: Technological Responsibility [5.201] demonstrate respect for the rights and responsibilities of others and self when using technological resources	6.P, 6.K4

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Newfoundland and Labrador GCOTE Framework Document	23	6-8	General Curriculum Outcomes (GCO)-5: Technological Responsibility [5.302] develop personal rules of conduct that ensure healthy and safe practices	6.P, 6.S1, 6.S2, 6.S3,
Newfoundland and Labrador GCOTE Framework Document	23	9-12	General Curriculum Outcomes (GCO)-5: Technological Responsibility [5.401] demonstrate responsible leadership in employing legal and ethical rules and principles [5.402] demonstrate responsible leadership in employing health and safety rules and standards	6.P, 6.S4
Northwest Territories Literacy and ICT Across the Curriculum	56	4-6	INQUIRY COMPONENT. ETHICS and RESPONSIBILITY -applies the rules about internet safety (username and password privacy) -understands healthy uses of ICT (eg. learning, sharing ideas, building relationships…) and unhealthy uses (eg. cyberbullying, hatred, hurting reputations…) INQUIRY COMPONENT. SOCIAL IMPLICATIONS -can tell about how cyberbullying away from school (or in school) can affect the class and school community	6.P, 6.K4, 6.S3, 6.S4
Northwest Territories Literacy and ICT Across the Curriculum	60	7-9	INQUIRY COMPONENT. ETHICS and RESPONSIBILITY -can identify possible health issues associated with ICT -understands healthy and unhealthy uses of ICT; and how cyberbullying impacts the classroom and school community INQUIRY COMPONENT. COLLABORATION -sometimes collaborates with others from a distance to pose questions, share and pool expertise, bridge ingenuity gaps, and determine risks using email, wikis, blogs, conferencing technologies, and other social media	6.K4, 6.S2, 6.S4
Northwest Territories Literacy and ICT Across the Curriculum	63	10-12	INQUIRY COMPONENT. ETHICS and RESPONSIBILITY -understands healthy uses of ICT (eg. sharing ideas, building relationships) and unhealthy uses (eg. cyberbullying, hatred, hurting reputations) -understands the need for rules about internet safety such as username and password privacy and careful use of words and ideas	6.P, 6.K4, 6.S4
Northwest Territories Literacy and ICT Across the Curriculum	64	10-12	INQUIRY COMPONENT. SOCIAL IMPLICATIONS -analyzes the advantages and disadvantages of ICT use in society -analyzes the trend of sharing information in a socially networked world INQUIRY COMPONENT. COLLABORATION	6.P, 6.K1, K.S2

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			-assesses, in collaborative settings, the value, purpose, and ethics of sharing community generated primary data on media sharing sites	
Nova Scotia ICT Curriculum	18-19	4-6	SOCIAL, ETHICAL, & HUMAN ISSUES SEHI 6.3 (RELATES TO 3.2) begin to identify social and ethical issues associated with the global access and distribution of information; and to develop concern for the accuracy of information, personal privacy and safety when in electronic environments such as Internet, with the assistance of the teacher	6.P, 6.K1
Nova Scotia ICT Curriculum	20-21	7-9	SOCIAL, ETHICAL, & HUMAN ISSUES SEHI 9.4 (RELATES TO 6.2, 6.7, 6.8) demonstrate an understanding of, and a commitment to, accuracy, ethical behaviour, and personal privacy and safety as they create and distribute information about themselves, others, and curriculum topics under study	6.P, 6.K1
Ontario Health and Physical Education	102	9	Personal Safety and Injury Prevention C1.2 demonstrate an understanding of the benefits and risks of using electronic communication technologies (e.g., easy access to useful information and entertainment but also to harmful or undesirable information and entertainment, such as pornography; enhanced ability to stay in touch with friends but also increased possibility of exposure to sexual predators, bullying, and sexting; ability to communicate one's thoughts and creative efforts to the rest of the world but also increased potential for loss of privacy), and describe strategies that they can apply to ensure their safety while using these technologies [IS, CT]	6.P, 6.K1, 6.K3, 6.S1, 6.S2, 6.S4
Ontario Technology Education	49	11	A4. demonstrate an understanding of and apply the interpersonal and communication skills necessary to work in a team environment.	6.S4
Prince Edward Island Information Technology Communication 401	43	10-12	CL7.6 Prepare a short report for a younger relative (or his or her parents) explaining how to safely use online social networking sites. CL7.7 Prepare an online survey to determine the degree of knowledge peers possess about online privacy and the use of social networking sites. CL7.8 Create a skit or video demonstrating a privacy concern with a social networking site. e.g.: someone writing personal information on a wall in real life for everyone to read, telling everyone in class/school a personal piece of information face-to-face from the front of a room, etc.	6.P, 6.K3, 6.S1, 6.S2, 6.S4

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Prince Edward Island Information Technology Communication 401	47	10-12	CL8.2: Examine the school's Internet "Acceptable Use Policy" to discuss security measures that exist on the schools' computer network. Identify ways that computer ethics or crime might come into play within the school context. Have students suggest possible penalties for committing certain types of offenses eg. trying to find out others' passwords, accessing forbidden sites on the Internet, damaging equipment or stealing mouse balls, changing passwords of students who might forget to log off the system, sending e-mail under the name of the person who forgot to log off, sending chain letters, sending unwanted or off-coloured e-mails to individuals within the school, trying to gain unauthorized access to other areas within the network.	6.K4
Prince Edward Island Information Technology Communication 401	59	10-12	IT2.6: Is the use of the Internet a right or a privilege? Discuss. (acceptable use policies, digital divide, protection of minors, access to information, etc.)	6.K1, 6.K4, 6.S1
Prince Edward Island Introductory Computer Studies CMP521A	85	10-12	LY4.4 Research recent security/privacy concerns and rights about online services such as wiki, blog, or collaborative documents. LY4.5 Prepare a short report or story book for a younger relative (or his or her parents) explaining how to safely use online social networking sites. LY4.6 Prepare an online survey to determine the degree of knowledge peers possess about online privacy and the use of social networking sites.	6.K1, 6.K4, 6.S1

Competency 7: Managing my data: Learning to exercise my rights

No exemplars

Competency 8: Managing my data: Learning to protect myself online

Source	Page #	Grade(s)	Text from Document	Grade Assigned
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 5 of pdf document	6-7	Digital Literacy Internet Safety: Including privacy and security (secured connections, passwords, personal information), digital footprint and dossier, cyberbullying, online scams, and cybercrimes	8.K1
British Columbia Computer Studies 10	1	10	Computer Studies • computer security risks • risks and rewards associated with big data, multi-device connectivity, and the Internet of Things	8.K1
British Columbia Web Development 10	1	10	Web Development • security and privacy implications	8.P
British Columbia Digital Communications 11	1	11	Digital Communications • digital tools to communicate and solicit information	8.P
Nova Scotia ICT Curriculum	16-17	K-3	SOCIAL, ETHICAL, & HUMAN ISSUES SEHI 3.2 work collaboratively with teachers to develop responsibility for their personal safety while using ICT	8.P, 8.K1
Nova Scotia ICT Curriculum	18-19	4-6	SOCIAL, ETHICAL, & HUMAN ISSUES SEHI 6.2 (RELATES TO 3.2) demonstrate respect for the privacy and intellectual property of others, maintain their personal privacy and safety	8.P
Ontario Health and Physical Education	102	9	Personal Safety and Injury Prevention C1.2 demonstrate an understanding of the benefits and risks of using electronic communication technologies (e.g., easy access to useful information and entertainment but also to harmful or undesirable information and entertainment, such as pornography; enhanced ability to stay in touch with friends but also increased possibility of exposure to sexual predators, bullying, and sexting; ability to communicate one's thoughts and creative efforts to the rest of the world but also increased potential for loss of privacy), and describe strategies that they can apply to ensure their safety while using these technologies [IS, CT]	8.P, 8.K1, 8.K3, 8.S1

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Prince Edward Island Information Technology Communication 401	39	10-12	CL6.1: Regularly virus check hard drives, CD/DVD's and individual files. CL6.6: Demonstrate encryption of files as they are saved to a jump drive. (Remind users that the file is not recoverable and can not be erased should the encryption password be forgotten)	8.K1, 8.S1
Prince Edward Island Information Technology Communication 401	43	10-12	CL7.4 Is it ethical to access a private wireless network that has been left open without security (hot spot)?	8.K3

Competency 9: The digital world: Becoming a digital citizen

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Alberta Curriculum Information and Communication Technology	13	4-6	Division 2: F3: Students will demonstrate a moral and ethical approach to the use of technology. 2.1 comply with the acceptable use policy of the school and school authority for Internet and networked services, including software licensing agreements 2.6 use electronic networks in an ethical manner	9.P, 9.S2, 9.S3
Alberta Curriculum Information and Communication Technology	13	7-9	Division 3: F.3 - Students will demonstrate a moral and ethical approach to the use of technology. -Specific Outcomes: 3.5: download and transmit only materials that comply with the established network use policies and practices 3.6: model and assume personal responsibility for ethical behaviour and attitudes and acceptable use of information technologies and sources in local and global contexts	9.P, 9.K2, 9.S2
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 5 of pdf document	6-7	Digital Literacy Internet Safety: Including privacy and security (secured connections, passwords, personal information), digital footprint and dossier, cyberbullying, online scams, and cybercrimes • elements of digital citizenship: digital self image, creative credit and copyright, relationships and copyright, cyberbullying, legal and ethical issues. • ethical and legal implications of current and future technologies	9.P, 9.K2, 9.K3, 9.K4, 9.S2, 9.S3
British Columbia Applied Design, Skills, and Technologies	n.p. on webpage, pg. 9 of pdf document	8	Digital Literacy: • elements of digital citizenship: digital self image, creative credit and copyright, relationships and copyright, cyberbullying, legal and ethical issues. • ethical and legal implications of current and future technologies • strategies for curating personal digital content, including management, personalization, organization, and maintenance of digital content; e-mail management; and workflow	9.P, 9.K2, 9.K3, 9.S3
British Columbia Computer Studies 10	1	10	Computer Studies • impacts of computers and technology on society and ethical issues of technology use and environmental sustainability • digital literacy and digital citizenship	9.P, 9.K2
British Columbia Media Design 10	1	10	Media Design	9.P, 9.K2,

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			• ethical, moral, and legal considerations associated with media arts technology use	9.K3, 9.S3
British Columbia Digital Communications 11	1	11	Digital Communications • influences of digital marketing in online content creation and curation • changes in journalism and reporting • persuasive writing for the web • critical evaluation of online resources	9.P, 9.K1
British Columbia Media Design 12	1	12	Media Design • ethical, moral, and legal considerations of using media arts technology to reproduce and distribute images, and how to deal with these issues in the design process • role of media arts in reflecting, sustaining, and challenging beliefs and traditions • ways in which content and form influence and are influenced by historical, social, and cultural contexts • ways that innovative technologies reflect the complexity of social, environmental, and ethical concerns of the 21st century	9.P, 9.K2, 9.K3
Manitoba Curriculum Intro ICT Learning Experiences	4-5	4-6	Community and Diversity: Interdisciplinary Early Years Multimedia (IEYM) ICT.8: In this introductory Internet learning experience, students develop their understanding of the Internet, learn what they can expect to find on the World Wide Web, and learn how to search online effectively for pertinent, valid, and reliable information.	9.P, 9.K1, 9.K2, 9.S2
Manitoba Curriculum Senior Computer Science (20S, 30S, 40S)	11	10-12	Specific Learning Outcomes (SLO)- 1.3 Ethical Behaviour 1.3.1: Discuss the effects of computer crime, hacking, plagiarizing code, software piracy, virus distribution, and willful destruction of data.	9.P, 9.K2, 9.K3, 9.S2
New Brunswick Media Studies 120	7,8	12	Media Studies Curriculum 1.1. demonstrate an understanding of the key concepts of media literacy 1.2 employ critical literacy skills as media consumers 1.3 examine how media shape ideologies and culture 2.1 identify values and ideologies in media texts 2.2 discern the production process of media texts 3.1. justify their positions and respect the positions of others	9.P, 9.K1, 9.K2, 9.S2, 9.S3
Newfoundland and Labrador	18	3-5	General Curriculum Outcomes (GCO)- 3: History and Evolution of Technology	9.P

Source	Page #	Grade(s)	Text from Document	Grade Assigned
GCOTE Framework Document			[3.203] explain the role of education in helping people become knowledgeable about technology and in developing specific capabilities with technological tools and systems	
Newfoundland and Labrador GCOTE Framework Document	17	9-12	General Curriculum Outcomes (GCO)- 3: History and Evolution of Technology [3.403] analyse the symbiotic relationship between technology and education, including factors that influence standards for technological literacy and capability, and ways that the community responds	9.P, 9.S3
Northwest Territories Literacy and ICT Across the Curriculum	53	K-3	INQUIRY COMPONENT. GATHERING AND MAKING SENSE -can find information from electronic and media sources with lots of help -needs someone to type the findings -before notes are taken, asks if information is real and useful or if it is just "made up" or an advertisement	9.P, 9.K1, 9.K2
Northwest Territories Literacy and ICT Across the Curriculum	56	4-6	INQUIRY COMPONENT. ETHICS and RESPONSIBILITY -applies the rules about internet safety (username and password privacy) -understands healthy uses of ICT (eg. learning, sharing ideas, building relationships…) and unhealthy uses (eg. cyberbullying, hatred, hurting reputations…) INQUIRY COMPONENT. SOCIAL IMPLICATIONS -can tell about how cyberbullying away from school (or in school) can affect the class and school community INQUIRY COMPONENT. GATHERING AND MAKING SENSE -discovers the subtopics of the inquiry using ICTs that show related searches and questions and word clouds; decides whether to narrow or broaden the inquiry question -checks information for accuracy and usefulness	9.P, 9.K4, 9.S2, 9.S3
Northwest Territories Literacy and ICT Across the Curriculum	59	7-9	INQUIRY COMPONENT. GATHERING AND MAKING SENSE -uses criteria to analyze the information for its relevancy, context, validity (logical, real-world), accuracy, authorship, currency (general acceptance and use of the source), credibility (trustworthiness), and reliability (dependableness for future use)	9.P, 9.K1
Northwest Territories Literacy and ICT Across the Curriculum	63	10-12	INQUIRY COMPONENT. GATHERING AND MAKING SENSE -uses criteria to analyze information for its relevancy, context, validity (logical, real-world), accuracy, authorship, currency (general acceptance and use of the source), credibility (trustworthiness), and reliability (dependableness for future use)	9.P, 9.K1

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Northwest Territories Literacy and ICT Across the Curriculum	64	10-12	INQUIRY COMPONENT. ETHICS and RESPONSIBILITY -applies the school division's acceptable use of ICT policy to digital work -understands healthy uses of ICT (eg. sharing ideas, building relationships) and unhealthy uses (eg. cyberbullying, hatred, hurting reputations) INQUIRY COMPONENT. SOCIAL IMPLICATIONS -analyzes the advantages and disadvantages of ICT use in society -analyzes the trend of sharing information in a socially networked world -makes reasoned judgments about society's right to information versus the right to individual privacy INQUIRY COMPONENT. COLLABORATION -assesses, in collaborative settings, the value, purpose, and ethics of sharing community generated primary data on media sharing sites -makes individual/group primary data available for sharing with an online community by uploading it to a media sharing site under a "some rights reserved" type copyright license -helps the group understand the extent of the "fair dealing" rights the public have to use group data placed online by using Sec. 29 of the Canadian Copyright Act	9.P, 9.K1, 9.K2, 9.K3, 9.K4, 9.S2, 9.S3
Nova Scotia ICT Curriculum	16-17	K-3	SOCIAL, ETHICAL, & HUMAN ISSUES SEHI 3.3 respond personally and with developing critical awareness to a range of print, media, and electronic resources SEHI 3.4 begin to identify the values and points of view of resources as they select them for use SEHI 3.6 follow the Public School Program Network Access and Use Policy RESEARCH, PROBLEM SOLVING, & DECISION MAKING RPSD 3.3 create and analyse electronic charts, maps, and graphs to predict patterns and relationships in information, and to support decision-making	9.P, 9.K1, 9.K2
Nova Scotia ICT Curriculum	18-19	4-6	SOCIAL, ETHICAL, & HUMAN ISSUES SEHI 6.3 (RELATES TO 3.2) begin to identify social and ethical issues associated with the global access and distribution of information; and to develop concern for the accuracy of information, personal privacy and safety when in electronic environments such as Internet, with the assistance of the teacher SEHI 6.8 (RELATES TO 3.6) follow the Public School Program Network Access and Use Policy	9.P, 9.K2, 9.S3

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			PRODUCTIVITY PTS 6.4 (RELATES TO 3.1. 3.3) conduct simple research, then plan and create a representation of their learning, such as a storyboard, a multimedia presentation, an audio recording, a web page, or a print publication independently and in collaboration with others PTS 6.7 (RELATES TO 3.1, 3.3) create simple databases of information which they query to discover information patterns and relationships during research	
Nova Scotia ICT Curriculum	20-21	7-9	SOCIAL, ETHICAL, & HUMAN ISSUES SEHI 9.2 (RELATES TO 6.3, 6.4, 6.5, 6.6) identify and demonstrate the values and techniques of mass media, popular culture, and electronic information environments, and evaluate the effects of these techniques SEHI 9.4 (RELATES TO 6.2, 6.7, 6.8) demonstrate an understanding of, and a commitment to, accuracy, ethical behaviour, and personal privacy and safety as they create and distribute information about themselves, others, and curriculum topics under study SEHI 9.6 (RELATES TO 6.8) follow the Public School Program Network Access and Use Policy COMMUNICATION CT 9.3 (RELATES TO 6.1-6.5) critically evaluate how style, form, source, and medium influence the accessibility, validity and meaning of information with independence RESEARCH, PROBLEM SOLVING, & DECISION MAKING RPSD 9.2 (RELATES TO 6.1, 6.2) create and use electronic charts, maps, tables, graphs, spreadsheets, and databases to collect, analyse and display data independently RPSD 9.4 (RELATES TO 6.3, 6.4) assess the quality, comprehensiveness, biases, and perspectives of print, media and electronic resources for use in their curricular studies, with teacher guidance	9.P, 9.K1, 9.K2, 9.K4, 9.S2 9.S3
Nova Scotia ICT Curriculum	22-23	10-12	SOCIAL, ETHICAL, & HUMAN ISSUES 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 12.4 (RELATES TO 9.2 – 9.4) demonstrate habits of perception, analysis, judgment and selectivity as they	9.P, 9.K1, 9.K2, 9.S3

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			contribute to society through the discerning and critical use and creation of information resources and technology SEHI 12.7 (RELATES TO 9.8) follow the Public School Program Network Access and Use Policy PRODUCTIVITY 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 COMMUNICATION 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 RESEARCH, PROBLEM SOLVING, & DECISION MAKING RPSD 12.2 (RELATES TO 9.4) identify, evaluate, and compare the quality, congruences, discrepancies, omissions, biases, and perspectives of information content of print, media, and electronic resources	
Ontario Various Curriculum Preface Information	various	K-12	"Although the Internet is a powerful learning tool, there are potential risks attached to its use. All students must be made aware of issues related to Internet privacy, safety, and responsible use, as well as of the potential for abuse of this technology, particularly when it is used to promote hatred. ICT tools are also useful for teachers in their teaching practice, both for whole-class instruction and for the design of curriculum units that contain varied approaches to learning in order to meet diverse student needs."	9.P, 9.K1, 9.K2, 9.K4,
Ontario Health and Physical Education	102	9	Personal Safety and Injury Prevention C1.2 demonstrate an understanding of the benefits and risks of using electronic communication technologies (e.g., easy access to useful information and entertainment but also to harmful or undesirable information and entertainment, such as pornography; enhanced ability to stay in touch with friends but also increased possibility of exposure to sexual predators, bullying, and sexting; ability to communicate one's thoughts and creative efforts to the rest of the world but also increased potential for loss of privacy), and describe strategies that they can apply to ensure their safety while using these technologies [IS, CT]	9.P, 9.K1, 9.K2, 9.K3, 9.K4, 9.S2, 9.S3

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Ontario Media Studies	152	11	Media Studies *Overall Expectations:* A1. Understanding and Responding to Media Texts: demonstrate understanding of a variety of media texts; A2. Deconstructing Media Texts: deconstruct a variety of types of media texts, identifying the codes, conventions, and techniques used and explaining how they create meaning.	9.K1, 9.K2
Ontario Media Studies	154	11	Media Studies B1. Understanding Media Perspectives: analyse and critique media representations of people, issues, values, and behaviours; B2. Understanding the Impact of Media on Society: analyse and evaluate the impact of media on society.	9.P, 9.K1, 9.K3, 9.K4,
Prince Edward Island Information Technology Communication 401	43	10-12	CL7.8 Create a skit or video demonstrating a privacy concern with a social networking site. e.g.: someone writing personal information on a wall in real life for everyone to read, telling everyone in class/school a personal piece of information face-to-face from the front of a room, etc.	9.P, 9.K2, 9.K3, 9.K4 9.S3
Prince Edward Island Information Technology Communication 401	47	10-12	CL8.2: Examine the schools Internet "Acceptable Use Policy" to discuss security measures that exist on the schools' computer network. Identify ways that computer ethics or crime might come into play within the school context. Have students suggest possible penalties for committing certain types of offenses eg. trying to find out others' passwords, accessing forbidden sites on the Internet, damaging equipment or stealing mouse balls, changing passwords of students who might forget to log off the system, sending e-mail under the name of the person who forgot to log off, sending chain letters, sending unwanted or off-coloured e-mails to individuals within the school, trying to gain unauthorized access to other areas within the network.	9.P, 9.K2, 9.K3, 9.K4 9.S1 9.S2 9.S3
Saskatchewan Communication Media 10, 20, 30	4	12	Broad Areas of Learning: Engaged Citizens Engaged citizens have empathy for those around them and contribute to the well-being of the community as a whole. Practical and Applied Arts students learn how new skills and abilities enable them to make a difference in their personal lives as well as in their family and community. Skills and abilities gained in Practical and Applied Arts classes build a sense of confidence which encourages students to participate effectively in their world.	9.P, 9.S2

Appendix D: Select Third-Party Exemplars (English and French) by Competency

The following list is not exhaustive of all content on the sites but does provide major focus and strong examples of content graded as A or B, where applicable.

Competency 1: Personal Data

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Connect ED	n.p.	4-6	Originally developed and released in 2011 as a website, reallifeonline.ca, and DVD, it has been updated to align with the revised 2015 Health and Physical Education Curriculum and incorporated into Ophea's Teaching Tools. It is designed to help students develop safe and healthy online behaviours, such as netiquette, security, personal privacy and relationships (e.g., recognizing and managing cyberbullying), in the same way they would in real life situations. It helps students apply real life behaviour to life online. *(Connect[ED] is a database that features a series of educational resources assisting in Internet safety instruction. The grades given for this program have been assigned after reviewing all available resources the program offers.)* Example: Grade 4 Topics Covered: netiquette, cyberbullying (online) vs. bullying (offline), passwords – keeping them private, information posted online – it can live forever and be difficult to delete Summary Students will describe appropriate netiquette and Internet safety behaviour and will describe different types of bullying with a focus on cyberbullying. Students will apply a decision-making model and use problem solving skills to address risks and dangers to their own personal safety and the safety of others in a variety of situations.	B
Cyber Cops	n.p.	7-8	*Cyber Cops* teaches students in Grades 7 and 8 about the risks and safety issues surrounding the Internet and helps them recognize and respond to these situations. Designed for use in a classroom setting, the program includes a game for each grade, interactive modules and lesson plans linked to the Personal Safety and injury Prevention component of the Healthy Living strand of the H&PE Curriculum (2015) *(Cyber Cops is a database which provides an entire curriculum for educating student in grades 7-8 about internet safety. It aligns itself with expectations from Ontario curriculum documents. The grades given for this program have been assigned after reviewing all available resources the program offers.)*	B

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Cyber Tip	n.p.	K-12	Since its inception in September 2002, Cybertip.ca has evolved as a central component of Canada's national strategy to protect children from sexual exploitation on the internet. The tipline has responded to 245,000+ child sexual exploitation reports from the public and referred those reports to law enforcement for investigation, resulting in at least 514 individuals being arrested, hundreds of children being removed from abusive environments and the protection of countless children both within Canada and abroad. Cybertip.ca also provides education and awareness material to help keep Canadians safe, distributing more than 12 million safety resources free-of-charge to schools, law enforcement, child welfare, industry and other stakeholders over the past 15 years. -Operated by the Canadian Centre for Child Protection, Cybertip.ca's mandate is to protect children from online sexual exploitation by: • Receiving and processing tips from the public about potentially illegal material, as well as activities regarding the online sexual exploitation of children, and referring any relevant leads to the appropriate law enforcement agency and/or child welfare agency; and • Providing the public with information and other resources, as well as support and referral services, to help Canadians keep themselves and their families safe while using the Internet. *(This third party website is one of the programs supported by the Canadian Centre for Child Protection. This program is primarily focused on internet safety for students, and features many parent friendly resources as well. This program is also a database of multiple resources which can help educate students on the topics of cyberbullying, sextortion, child abuse, safer internet usage, and self/peer exploitation. The grades given for this program have been assigned after reviewing all available resources the program offers.)*	B
Privacy and the Internet (Éducaloi)	n.p.	K-12	Information such as your mother's name, the town you were born in and your date of birth might not seem important to you, and you might see nothing wrong with mentioning these things in your user profile. But did you know that a dishonest person could misuse this information? For example, this information could allow someone to figure out your passwords and get into your online accounts. This information is also important to companies that want to know about your habits and interests so they can send you personalized advertising.	A

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Ta Vie Privée sur Internet (Éducaloi)	n.p.	K-12	Le nom de ta mère, la ville où tu es né ou ta date de naissance... Ces renseignements peuvent te sembler anodins et tu ne vois peut-être aucun inconvénient à en faire mention dans ton profil d'utilisateur. Savais-tu que ces renseignements peuvent être utilisés par une personne malintentionnée? En effet, ces renseignements pourraient permettre à une personne de retracer tes mots de passe et d'accéder à tes comptes sur Internet. Ils sont aussi d'une grande valeur pour les entreprises qui veulent connaître tes habitudes et intérêts pour te faire parvenir des publicités personnalisées.	A
Guide pour gérer les aspects juridiques du Web 2.0 en milieu scolaire	28	K-12	En effet, les environements de reseaux sociaux rendent tres facile le jumelage de renseignement relatifs a une personne et pas consequent la possibilite de revalation indirecte d'informations personelle, dont certaines pourraient constituer des revelations sur la vie privee. Par exemple, les allusions aux endroits frequentes ainsi de information sur les allees et venues d'un usager ou de ses amis pourraient generer des revelations allant au-dela de ce que la personne concernee par les informations aurait souhaite partager. Questions a verifier Le paricipant est-il amene a devoiler des renseignements personnels sur lui meme ou sur une autre personne? Le participant est-il au courant des risques inherents a l'utilisation de cet outil? Est-ce qu'il y a un controle sur l'age des participants?	A
Internet 101	n.p.	K-12	*(This database includes articles on Internet Safety, Cyberbullying, Phishing, Identity Theft, Online Shopping and Protecting your Information Online. It also includes safety tips for Teens and Parents and includes links to learn more about Fraud and Scams and Reporting Child Exploitation. The grades given for this program have been assigned after reviewing all available resources the program offers.)* <u>*Example:*</u> Protecting your Information Online Everyone has an online profile these days, but sometimes we aren't aware of how to make sure that what we post online stays private. Remember – what goes online is pretty much there for life. Here are some tips that can help you protect your online reputation: • Are your security settings set to "Friends Only?" Websites like Facebook update their security settings often (and usually without warning), so check your settings at least once a week. Make sure the settings are as private as you're	A

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			comfortable with – you don't want strangers liking your pictures do you?! • If a police officer looked at your profile, would you be worried about what they could find? Are there are any pictures of you online doing anything illegal (like underage drinking or doing drugs)? If you wouldn't want a police officer to see it then leave it offline, because anything online is fair game to be used by police officers. Or better yet, just make sure you aren't doing anything the police would have to deal with. • Have you met each of your contacts? You may add complete strangers to your profile to make new friends, or to make your friend count higher. Whatever the reason, allowing strangers to see all of your personal information is just creepy. If you wouldn't share personal details with a stranger on the street, then why let them access it online? • Does the message look suspicious? What scammers, hackers and phishers are able to pull off these days is endless. Bottom line is, if it looks suspicious, don't click it. If you get a message from a friend or stranger and it looks kind of sketchy, ask the sender personally if the message came from them before you open it. • Can strangers find you? Sharing details like your first name and gender are okay, and so is sharing your general location (e.g. "Canada" or "Ottawa"). But sharing things like your phone number, home address or even what school you go to makes it easy for anyone to find you. If you don't want to get spammed, end up a victim of identity theft or let Joe Shmoe know where you live, then keep personal information like your phone number and email address off your profile.	
Media Smarts	n.p.	K-12	MediaSmarts is a Canadian not-for-profit charitable organization for digital and media literacy. Our vision is that children and youth have the critical thinking skills to engage with media as active and informed digital citizens. Our Beliefs • We believe that media are powerful forces in the lives of children and youth, with both positive and negative influences on their social, emotional, intellectual, and physical wellbeing. • We believe that education is one of the best responses to media issues, in order to develop engaged, informed and active citizens.	A

Source	Page #	Grade(s)	Text from Document	Grade Assigned

- We believe citizens of all ages have the right to resources and tools to help them develop the knowledge, values and critical thinking skills that are needed to thrive in the global media world.
- We believe that responses to media issues must be based on evidence, not emotion.
- We believe that educational approaches to digital and media literacy must be grounded in the lived experience of children and youth.
- We believe in promoting both rights and responsibilities to guide children and youth in becoming ethical and reflective media users.
- We believe in an affirmative approach to developing digital and media literacy skills, one that acknowledges and builds on media's positive, creative and pleasurable dimensions.
- We believe that active parental involvement is essential to raising "media smart" children and teens.
- We believe in a shared responsibility between the public and private sectors and communities, to ensure that the interests of young people and their families are best served.

(MediaSmarts is a database that features a series of articles and educational resources assisting in the instruction of Digital and Media Literacy. They have a very thorough bank of resources. The grades given for this program have been assigned after reviewing available resources the program offers.)

<u>Example:</u>
Learning to respect privacy is an important component of the development of digital citizenship. Digital citizenship encompasses all aspects of online life, emphasizing ethical conduct and engagement, particularly when it comes to protecting private information, ensuring safety, and recognizing and managing online bullying, either as a target or a witness. [7] Digital citizenship involves being more aware of social privacy, by realizing the extent of the information that we share, as well as respecting the privacy of others.

Youth once understood social networking sites and the Internet as a private space wherein they could communicate with their friends. While they are now fully aware that their actions are watched by parents, teachers, and others, there is still a sense among youth that simply because you *can* access something doesn't mean you *should*. [5] As a result, many

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			youth feel as though their privacy is invaded when parents, teachers, or uninvited observers read or comment on the material they have posted, even though it is posted in a public space. Social privacy issues also involve privacy ethics. Not only is it important to have our privacy respected and protected, it is important to respect and protect the privacy of others. Sexting is an example of a situation where privacy ethics are extremely important.	
WiredSafety	n.p.	K-12	Typically, privacy laws cover sensitive information (racial, religious, union membership, governmental benefits information, victimization records, school records, etc.), financial information (social security numbers or social insurance numbers, bank account and credit card information, credit histories and creditworthiness, etc.), health information (insurance, health records, disabilities, risks, family health records, etc.) and personal information collected from or about children (which may cover minors, typically 18 or under, or preteens, or youth under the age of fourteen, depending on the jurisdiction and country). Information collected about us online generally falls into one of three types: personally identifiable information (where it can be tracked back to you and tied to your real name, contact information etc.), generic information (which removes all personally identifiable information and just stores the general information, such as gender, age, state or town you live in, etc.) and profile information (that may tie to your online identity, but doesn't disclose who you are in real life).	A

Competency 2: Privacy, civil liberties, and protection of personal data

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Connect ED	n.p.	4-6	Originally developed and released in 2011 as a website, reallifeonline.ca, and DVD, it has been updated to align with the revised 2015 Health and Physical Education Curriculum and incorporated into Ophea's Teaching Tools. It is designed to help students develop safe and healthy online behaviours, such as netiquette, security, personal privacy and relationships (e.g., recognizing and managing cyberbullying), in the same way they would in real life situations. It helps students apply real life behaviour to life online. *(Connect[ED] is a database that features a series of educational resources assisting in Internet safety instruction. The grades given for this program have been assigned after reviewing all available resources the program offers.)* Example: Grade 4 Topics Covered: netiquette, cyberbullying (online) vs. bullying (offline), passwords – keeping them private, information posted online – it can live forever and be difficult to delete Summary Students will describe appropriate netiquette and Internet safety behaviour and will describe different types of bullying with a focus on cyberbullying. Students will apply a decision-making model and use problem solving skills to address risks and dangers to their own personal safety and the safety of others in a variety of situations.	B
Cyber Tip	n.p.	K-12	Since its inception in September 2002, Cybertip.ca has evolved as a central component of Canada's national strategy to protect children from sexual exploitation on the internet. The tipline has responded to 245,000+ child sexual exploitation reports from the public and referred those reports to law enforcement for investigation, resulting in at least 514 individuals being arrested, hundreds of children being removed from abusive environments and the protection of countless children both within Canada and abroad. Cybertip.ca also provides education and awareness material to help keep Canadians safe, distributing more than 12 million safety resources free-of-charge to schools, law enforcement, child welfare, industry and other stakeholders over the past 15 years. -Operated by the Canadian Centre for Child Protection, Cybertip.ca's mandate is to protect children from online sexual exploitation by: • Receiving and processing tips from the public about potentially illegal material, as well as activities regarding the online sexual exploitation of children,	B

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			and referring any relevant leads to the appropriate law enforcement agency and/or child welfare agency; and • Providing the public with information and other resources, as well as support and referral services, to help Canadians keep themselves and their families safe while using the Internet. *(This third party website is one of the programs supported by the Canadian Centre for Child Protection. This program is primarily focused on internet safety for students, and features many parent friendly resources as well. This program is also a database of multiple resources which can help educate students on the topics of cyberbullying, sextortion, child abuse, safer internet usage, and self/peer exploitation. The grades given for this program have been assigned after reviewing all available resources the program offers.)*	
Privacy and the Internet (Éducaloi)	n.p.	K-12	In the virtual world, protection of privacy is more difficult if you often post personal information. You should also be careful about your friends' personal information. This personal information belongs to them.	A
Ta Vie Privée sur Internet (Éducaloi)	n.p.	K-12	Dans le monde virtuel, la protection de ta vie privée devient plus difficile si tu révèles fréquemment des renseignements personnels. Fais aussi attention aux informations que tu partages sur la vie privée des autres. Elles leur appartiennent.	A
Internet 101	n.p.	K-12	*(This database includes articles on Internet Safety, Cyberbullying, Phishing, Identity Theft, Online Shopping and Protecting your Information Online. It also includes safety tips for Teens and Parents and includes links to learn more about Fraud and Scams and Reporting Child Exploitation. The grades given for this program have been assigned after reviewing all available resources the program offers.)* *<u>Example:</u>* **Protecting your Information Online** Everyone has an online profile these days, but sometimes we aren't aware of how to make sure that what we post online stays private. Remember – what goes online is pretty much there for life. Here are some tips that can help you protect your online reputation: • Are your security settings set to "Friends Only?" Websites like Facebook update their security settings often (and usually without warning), so check your settings at least once a week. Make sure the settings are as private as you're comfortable with – you don't want strangers liking your pictures do you?!	A

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			• If a police officer looked at your profile, would you be worried about what they could find? Are there are any pictures of you online doing anything illegal (like underage drinking or doing drugs)? If you wouldn't want a police officer to see it then leave it offline, because anything online is fair game to be used by police officers. Or better yet, just make sure you aren't doing anything the police would have to deal with. • Have you met each of your contacts? You may add complete strangers to your profile to make new friends, or to make your friend count higher. Whatever the reason, allowing strangers to see all of your personal information is just creepy. If you wouldn't share personal details with a stranger on the street, then why let them access it online? • Does the message look suspicious? What scammers, hackers and phishers are able to pull off these days is endless. Bottom line is, if it looks suspicious, don't click it. If you get a message from a friend or stranger and it looks kind of sketchy, ask the sender personally if the message came from them before you open it. • Can strangers find you? Sharing details like your first name and gender are okay, and so is sharing your general location (e.g. "Canada" or "Ottawa"). But sharing things like your phone number, home address or even what school you go to makes it easy for anyone to find you. If you don't want to get spammed, end up a victim of identity theft or let Joe Shmoe know where you live, then keep personal information like your phone number and email address off your profile.	
Media Smarts	n.p.	K-12	MediaSmarts is a Canadian not-for-profit charitable organization for digital and media literacy. Our vision is that children and youth have the critical thinking skills to engage with media as active and informed digital citizens. **Our Beliefs** • We believe that media are powerful forces in the lives of children and youth, with both positive and negative influences on their social, emotional, intellectual, and physical wellbeing. • We believe that education is one of the best responses to media issues, in order to develop engaged, informed and active citizens. • We believe citizens of all ages have the right to resources and tools to help them develop the	A

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knowledge, values and critical thinking skills that are needed to thrive in the global media world.
- We believe that responses to media issues must be based on evidence, not emotion.
- We believe that educational approaches to digital and media literacy must be grounded in the lived experience of children and youth.
- We believe in promoting both rights and responsibilities to guide children and youth in becoming ethical and reflective media users.
- We believe in an affirmative approach to developing digital and media literacy skills, one that acknowledges and builds on media's positive, creative and pleasurable dimensions.
- We believe that active parental involvement is essential to raising "media smart" children and teens.
- We believe in a shared responsibility between the public and private sectors and communities, to ensure that the interests of young people and their families are best served.

(MediaSmarts is a database that features a series of articles and educational resources assisting in the instruction of Digital and Media Literacy. They have a very thorough bank of resources. The grades given for this program have been assigned after reviewing available resources the program offers.)

Example:
Learning to respect privacy is an important component of the development of digital citizenship. Digital citizenship encompasses all aspects of online life, emphasizing ethical conduct and engagement, particularly when it comes to protecting private information, ensuring safety, and recognizing and managing online bullying, either as a target or a witness. [7] Digital citizenship involves being more aware of social privacy, by realizing the extent of the information that we share, as well as respecting the privacy of others.

Youth once understood social networking sites and the Internet as a private space wherein they could communicate with their friends. While they are now fully aware that their actions are watched by parents, teachers, and others, there is still a sense among youth that simply because you *can* access something doesn't mean you *should*. [5] As a result, many youth feel as though their privacy is invaded when parents, teachers, or uninvited observers read or comment on the

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			material they have posted, even though it is posted in a public space. Social privacy issues also involve privacy ethics. Not only is it important to have our privacy respected and protected, it is important to respect and protect the privacy of others. Sexting is an example of a situation where privacy ethics are extremely important.	
WiredSafety	n.p.	K-12	Privacy means different things to different people. To some it is the right to be left alone. To others it's protecting their personal information and not sharing secrets. Sometimes it means deciding who has access to what information about you and what they can do with it. And to everyone, it means you have or should have control over some things about you, without having to share them at all. The laws that govern privacy and related human rights range from state, provincial and federal constitutions or charters of rights, the Magna Carta, data protection laws and regulations, statutes, common law to contractual rights and consumer protection.	A

Competency 3: Understanding the digital environment – technical aspects

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Cyber Cops	n.p.	7-8	*Cyber Cops* teaches students in Grades 7 and 8 about the risks and safety issues surrounding the Internet and helps them recognize and respond to these situations. Designed for use in a classroom setting, the program includes a game for each grade, interactive modules and lesson plans linked to the Personal Safety and injury Prevention component of the Healthy Living strand of the H&PE Curriculum (2015) *(Cyber Cops is a database which provides an entire curriculum for educating student in grades 7-8 about internet safety. It aligns itself with expectations from Ontario curriculum documents. The grades given for this program have been assigned after reviewing all available resources the program offers.)* <u>Example from grade 7 Mirror Image Unit</u> WHAT WILL THE STUDENTS LEARN? Summary Students will connect the harassment definition to include the description of the term cyberharassment. Students will identify specific ways of dealing with cyberharassment. Students will identify people and resources that can support someone experiencing cyberharassment. Key Questions Can I apply relationship and social skills as I communicate the benefits and dangers associated with the use of computers and other technologies? Can I apply critical thinking when assessing the impact of different types of bullying and harassment? Can I apply critical thinking when identifying ways of preventing or resolving bullying or harassment?	C

Competency 4: Understanding the digital environment – economic aspects

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Common Sense Media	n/p	K-12	Example (in video form) Commercials have been around forever. But with viral marketing, data tracking, product placements, and other promotional tricks, today's advertising landscape is a whole new ball game. Want to ad-proof your kid? Find out the real impact of advertising, which ages are the most vulnerable, and how to help your kids view ads critically so they'll become savvy consumers.	B
Privacy and the Internet (Éducaloi)	n.p.	K-12	Information such as your mother's name, the town you were born in and your date of birth might not seem important to you, and you might see nothing wrong with mentioning these things in your user profile. But did you know that a dishonest person could misuse this information? For example, this information could allow someone to figure out your passwords and get into your online accounts. This information is also important to companies that want to know about your habits and interests so they can send you personalized advertising.	C
Ta Vie Privée sur Internet (Éducaloi)	n.p.	K-12	Le nom de ta mère, la ville où tu es né ou ta date de naissance... Ces renseignements peuvent te sembler anodins et tu ne vois peut-être aucun inconvénient à en faire mention dans ton profil d'utilisateur. Savais-tu que ces renseignements peuvent être utilisés par une personne malintentionnée? En effet, ces renseignements pourraient permettre à une personne de retracer tes mots de passe et d'accéder à tes comptes sur Internet. Ils sont aussi d'une grande valeur pour les entreprises qui veulent connaître tes habitudes et intérêts pour te faire parvenir des publicités personnalisées.	C
WiredSafety	n.p.	K-12	Information collected about us online generally falls into one of three types: personally identifiable information (where it can be tracked back to you and tied to your real name, contact information etc.), generic information (which removes all personally identifiable information and just stores the general information, such as gender, age, state or town you live in, etc.) and profile information (that may tie to your online identity, but doesn't disclose who you are in real life).	A

Competency 5: Understanding personal data regulations and legislation

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Protect Kids Online: The Door Not Locked	n.p.	K-9	*(This Centre operates many different programs which include many various articles and resources which coincide with many of the competencies. They include resources for teachers, parents, students, and cater to various grades and interests while focusing on internet safety and digital citizenship. There is a minimum of 14 programs operated and this list continues to grow. Each of these programs has a series of resources. Grades have been assigned after reviewing resources offered by the Centre.)* <u>Example</u> *Children 8–10 years of age* *Online luring* Online luring commonly refers to the process through which someone communicates with a child online for a sexual purpose. The Criminal Code (Canada) defines a luring offence as someone using telecommunications (e.g., chat, messaging, texting) to communicate with someone they believe to be under the age of 18 in order to commit a designated offence against that child. Individuals seeking access to children for a sexual purpose may connect with kids at this age through online games and apps that have a chat and/or video chat capability.	B

Competency 6: Understanding personal data regulations: Controlling the use of personal information

Source	Page #	Grade(s)	Text from Document	Grade Assigned
Privacy and the Internet (Éducaloi)	n.p.	K-12	Often, it only takes a click to post a picture or information on the Internet. Posting is easy, but it is almost impossible to reverse the process. This is why you should only post information that you are comfortable with everybody seeing (such as your parents, your teacher or a future employer).	B
Ta Vie Privée sur Internet (Éducaloi)	n.p.	K-12	Il ne suffit souvent que d'un « clic » pour publier une photo ou de l'information sur Internet. S'il est facile de publier, il peut être difficile de retirer de l'information! C'est pour cela que tu dois publier uniquement l'information qui pourrait être consultée par n'importe qui (y compris tes parents, ton enseignant ou un futur employeur), sans que tu sois mal à l'aise!	B
Guide pour gérer les aspects juridiques du Web 2.0 en milieu scolaire	28	K-12	En effet, les environements de reseaux sociaux rendent tres facile le jumelage de renseignement relatifs a une personne et pas consequent la possibilite de revalation indirecte d'informations personelle, dont certaines pourraient constituer des revelations sur la vie privee. Par exemple, les allusions aux endroits frequentes ainsi de information sur les allees et venues d'un usager ou de ses amis pourraient generer des revelations allant au-dela de ce que la personne concernee par les informations aurait souhaite partager. Questions a verifier Le paricipant est-il amene a devoiler des renseignements personnels sur lui meme ou sur une autre personne? Le participant est-il au courant des risques inherents a l'utilisation de cet outil? Est-ce qu'il y a un controle sur l'age des participants?	A
Internet 101	n.p.	K-12	*(This database includes articles on Internet Safety, Cyberbullying, Phishing, Identity Theft, Online Shopping and Protecting your Information Online. It also includes safety tips for Teens and Parents and includes links to learn more about Fraud and Scams and Reporting Child Exploitation. The grades given for this program have been assigned after reviewing all available resources the program offers.)* *<u>Example:</u>* **Protecting your Information Online** Everyone has an online profile these days, but sometimes we aren't aware of how to make sure that what we post online stays private. Remember – what goes online is pretty much there for life. Here are some tips that can help you protect your online reputation:	A

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			• Are your security settings set to "Friends Only?" Websites like Facebook update their security settings often (and usually without warning), so check your settings at least once a week. Make sure the settings are as private as you're comfortable with – you don't want strangers liking your pictures do you?! • If a police officer looked at your profile, would you be worried about what they could find? Are there are any pictures of you online doing anything illegal (like underage drinking or doing drugs)? If you wouldn't want a police officer to see it then leave it offline, because anything online is fair game to be used by police officers. Or better yet, just make sure you aren't doing anything the police would have to deal with. • Have you met each of your contacts? You may add complete strangers to your profile to make new friends, or to make your friend count higher. Whatever the reason, allowing strangers to see all of your personal information is just creepy. If you wouldn't share personal details with a stranger on the street, then why let them access it online? • Does the message look suspicious? What scammers, hackers and phishers are able to pull off these days is endless. Bottom line is, if it looks suspicious, don't click it. If you get a message from a friend or stranger and it looks kind of sketchy, ask the sender personally if the message came from them before you open it. • Can strangers find you? Sharing details like your first name and gender are okay, and so is sharing your general location (e.g. "Canada" or "Ottawa"). But sharing things like your phone number, home address or even what school you go to makes it easy for anyone to find you. If you don't want to get spammed, end up a victim of identity theft or let Joe Shmoe know where you live, then keep personal information like your phone number and email address off your profile.	
Preparing for the Workforce: Building a Digital Portfolio (Learn Québec)	n.p.	10-11	Digital Footprint ●The importance of a positive online identity ●Cleaning up any "mistakes"	B

Competency 7: Managing my data: Learning to exercise my rights

No exemplars

Competency 8: Managing my data: Learning to protect myself online

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Cyber Cops	n.p.	7-8	*Cyber Cops* teaches students in Grades 7 and 8 about the risks and safety issues surrounding the Internet and helps them recognize and respond to these situations. Designed for use in a classroom setting, the program includes a game for each grade, interactive modules and lesson plans linked to the Personal Safety and injury Prevention component of the Healthy Living strand of the H&PE Curriculum (2015) *(Cyber Cops is a database which provides an entire curriculum for educating student in grades 7-8 about internet safety. It aligns itself with expectations from Ontario curriculum documents. The grades given for this program have been assigned after reviewing all available resources the program offers.)* <u>Example from grade 7 Mirror Image Unit</u> WHAT WILL THE STUDENTS LEARN? Summary Students will connect the harassment definition to include the description of the term cyberharassment. Students will identify specific ways of dealing with cyberharassment. Students will identify people and resources that can support someone experiencing cyberharassment. Key Questions Can I apply relationship and social skills as I communicate the benefits and dangers associated with the use of computers and other technologies? Can I apply critical thinking when assessing the impact of different types of bullying and harassment? Can I apply critical thinking when identifying ways of preventing or resolving bullying or harassment?	B
Cyber Tip	n.p.	K-12	Since its inception in September 2002, Cybertip.ca has evolved as a central component of Canada's national strategy to protect children from sexual exploitation on the internet. The tipline has responded to 245,000+ child sexual exploitation reports from the public and referred those reports to law enforcement for investigation, resulting in at least 514 individuals being arrested, hundreds of children being removed from abusive environments and the protection of countless children both within Canada and abroad. Cybertip.ca also provides education and awareness material to help keep	C

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			Canadians safe, distributing more than 12 million safety resources free-of-charge to schools, law enforcement, child welfare, industry and other stakeholders over the past 15 years. -Operated by the Canadian Centre for Child Protection, Cybertip.ca's mandate is to protect children from online sexual exploitation by: • Receiving and processing tips from the public about potentially illegal material, as well as activities regarding the online sexual exploitation of children, and referring any relevant leads to the appropriate law enforcement agency and/or child welfare agency; and • Providing the public with information and other resources, as well as support and referral services, to help Canadians keep themselves and their families safe while using the Internet. *(This third party website is one of the programs supported by the Canadian Centre for Child Protection. This program is primarily focused on internet safety for students, and features many parent friendly resources as well. This program is also a database of multiple resources which can help educate students on the topics of cyberbullying, sextortion, child abuse, safer internet usage, and self/peer exploitation. The grades given for this program have been assigned after reviewing all available resources the program offers.)* **Examples** Grade 7/8 Education Module Created in response to emerging online risks and designed to address adults using technology to exploit children for a sexual purpose, self/peer exploitation (sexting or selfies) and cyberbullying, lessons include: • Healthy Friendships • Healthy Dating Relationships • Boundaries and Personal Safety • Responding to Unsafe Situations Grade 9/10 Education Module Created to address the harmful impacts and the potential legal implications with youth engaged in sexual exploitation/violence, extreme bullying and the misuse of technology, lessons include: • Influences on Teens' Ideas about Relationships • Love vs. Control in Dating Relationships • Canada's Sexual Consent Laws • Cyberbullying and Harassment • Identifying When and How to Get Help	

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Privacy and the Internet (Éducaloi)	n.p.	K-12	Often, it only takes a click to post a picture or information on the Internet. Posting is easy, but it is almost impossible to reverse the process. This is why you should only post information that you are comfortable with everybody seeing (such as your parents, your teacher or a future employer).	B
Ta Vie Privée sur Internet (Éducaloi)	n.p.	K-12	Il ne suffit souvent que d'un « clic » pour publier une photo ou de l'information sur Internet. S'il est facile de publier, il peut être difficile de retirer de l'information! C'est pour cela que tu dois publier uniquement l'information qui pourrait être consultée par n'importe qui (y compris tes parents, ton enseignant ou un futur employeur), sans que tu sois mal à l'aise!	B
Guide pour gérer les aspects juridiques du Web 2.0 en milieu scolaire	28	K-12	En effet, les environements de reseaux sociaux rendent tres facile le jumelage de renseignement relatifs a une personne et pas consequent la possibilite de revalation indirecte d'informations personelle, dont certaines pourraient constituer des revelations sur la vie privee. Par exemple, les allusions aux endroits frequentes ainsi de information sur les allees et venues d'un usager ou de ses amis pourraient generer des revelations allant au-dela de ce que la personne concernee par les informations aurait souhaite partager. Questions a verifier Le paricipant est-il amene a devoiler des renseignements personnels sur lui meme ou sur une autre personne? Le participant est-il au courant des risques inherents a l'utilisation de cet outil? Est-ce qu'il y a un controle sur l'age des participants?	A
Internet 101	n.p.	K-12	*(This database includes articles on Internet Safety, Cyberbullying, Phishing, Identity Theft, Online Shopping and Protecting your Information Online. It also includes safety tips for Teens and Parents and includes links to learn more about Fraud and Scams and Reporting Child Exploitation. The grades given for this program have been assigned after reviewing all available resources the program offers.)* *<u>Example:</u>* **Protecting your Information Online** Everyone has an online profile these days, but sometimes we aren't aware of how to make sure that what we post online stays private. Remember – what goes online is pretty much there for life. Here are some tips that can help you protect your online reputation: • Are your security settings set to "Friends Only?" Websites like Facebook update their security settings often (and usually without warning), so	A

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			check your settings at least once a week. Make sure the settings are as private as you're comfortable with – you don't want strangers liking your pictures do you?! • If a police officer looked at your profile, would you be worried about what they could find? Are there are any pictures of you online doing anything illegal (like underage drinking or doing drugs)? If you wouldn't want a police officer to see it then leave it offline, because anything online is fair game to be used by police officers. Or better yet, just make sure you aren't doing anything the police would have to deal with. • Have you met each of your contacts? You may add complete strangers to your profile to make new friends, or to make your friend count higher. Whatever the reason, allowing strangers to see all of your personal information is just creepy. If you wouldn't share personal details with a stranger on the street, then why let them access it online? • Does the message look suspicious? What scammers, hackers and phishers are able to pull off these days is endless. Bottom line is, if it looks suspicious, don't click it. If you get a message from a friend or stranger and it looks kind of sketchy, ask the sender personally if the message came from them before you open it. • Can strangers find you? Sharing details like your first name and gender are okay, and so is sharing your general location (e.g. "Canada" or "Ottawa"). But sharing things like your phone number, home address or even what school you go to makes it easy for anyone to find you. If you don't want to get spammed, end up a victim of identity theft or let Joe Shmoe know where you live, then keep personal information like your phone number and email address off your profile.	

Competency 9: The digital world: Becoming a digital citizen

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Common Sense Media	n/p	K-12	Common Sense Education provides high-quality digital literacy and citizenship programs to educators and school communities. Together, we work to empower students to harness technology for learning and life. Our free resources include ratings and reviews of digital tools, a comprehensive K–12 Digital Citizenship Curriculum, ready-made lesson plans, videos, webinars, and more. Example (in video form) Commercials have been around forever. But with viral marketing, data tracking, product placements, and other promotional tricks, today's advertising landscape is a whole new ball game. Want to ad-proof your kid? Find out the real impact of advertising, which ages are the most vulnerable, and how to help your kids view ads critically so they'll become savvy consumers.	A
Connect ED	n.p.	4-6	Originally developed and released in 2011 as a website, reallifeonline.ca, and DVD, it has been updated to align with the revised 2015 Health and Physical Education Curriculum and incorporated into Ophea's Teaching Tools. It is designed to help students develop safe and healthy online behaviours, such as netiquette, security, personal privacy and relationships (e.g., recognizing and managing cyberbullying), in the same way they would in real life situations. It helps students apply real life behaviour to life online. *(Connect[ED] is a database that features a series of educational resources assisting in Internet safety instruction. The grades given for this program have been assigned after reviewing all available resources the program offers.)* Example: Grade 4 Topics Covered: netiquette, cyberbullying (online) vs. bullying (offline), passwords – keeping them private, information posted online – it can live forever and be difficult to delete Summary Students will describe appropriate netiquette and Internet safety behaviour and will describe different types of bullying with a focus on cyberbullying. Students will apply a decision-making model and use problem solving skills to address risks and dangers to their own personal safety and the safety of others in a variety of situations.	A

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Cyber Cops	n.p.	7-8	*Cyber Cops* teaches students in Grades 7 and 8 about the risks and safety issues surrounding the Internet and helps them recognize and respond to these situations. Designed for use in a classroom setting, the program includes a game for each grade, interactive modules and lesson plans linked to the Personal Safety and injury Prevention component of the Healthy Living strand of the H&PE Curriculum (2015) *(Cyber Cops is a database which provides an entire curriculum for educating student in grades 7-8 about internet safety. It aligns itself with expectations from Ontario curriculum documents. The grades given for this program have been assigned after reviewing all available resources the program offers.)* <u>Example from grade 7 Mirror Image Unit</u> WHAT WILL THE STUDENTS LEARN? Summary Students will connect the harassment definition to include the description of the term cyberharassment. Students will identify specific ways of dealing with cyberharassment. Students will identify people and resources that can support someone experiencing cyberharassment. Key Questions Can I apply relationship and social skills as I communicate the benefits and dangers associated with the use of computers and other technologies? Can I apply critical thinking when assessing the impact of different types of bullying and harassment? Can I apply critical thinking when identifying ways of preventing or resolving bullying or harassment?	A
Cyber Tip	n.p.	K-12	Since its inception in September 2002, Cybertip.ca has evolved as a central component of Canada's national strategy to protect children from sexual exploitation on the internet. The tipline has responded to 245,000+ child sexual exploitation reports from the public and referred those reports to law enforcement for investigation, resulting in at least 514 individuals being arrested, hundreds of children being removed from abusive environments and the protection of countless children both within Canada and abroad. Cybertip.ca also provides education and awareness material to help keep Canadians safe, distributing more than 12 million safety resources free-of-charge to schools, law enforcement, child welfare, industry and other stakeholders over the past 15 years.	A

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			-Operated by the Canadian Centre for Child Protection, Cybertip.ca's mandate is to protect children from online sexual exploitation by: • Receiving and processing tips from the public about potentially illegal material, as well as activities regarding the online sexual exploitation of children, and referring any relevant leads to the appropriate law enforcement agency and/or child welfare agency; and • Providing the public with information and other resources, as well as support and referral services, to help Canadians keep themselves and their families safe while using the Internet. *(This third party website is one of the programs supported by the Canadian Centre for Child Protection. This program is primarily focused on internet safety for students, and features many parent friendly resources as well. This program is also a database of multiple resources which can help educate students on the topics of cyberbullying, sextortion, child abuse, safer internet usage, and self/peer exploitation. The grades given for this program have been assigned after reviewing all available resources the program offers.)* **Examples** Grade 7/8 Education Module Created in response to emerging online risks and designed to address adults using technology to exploit children for a sexual purpose, self/peer exploitation (sexting or selfies) and cyberbullying, lessons include: • Healthy Friendships • Healthy Dating Relationships • Boundaries and Personal Safety • Responding to Unsafe Situations Grade 9/10 Education Module Created to address the harmful impacts and the potential legal implications with youth engaged in sexual exploitation/violence, extreme bullying and the misuse of technology, lessons include: • Influences on Teens' Ideas about Relationships • Love vs. Control in Dating Relationships • Canada's Sexual Consent Laws • Cyberbullying and Harassment • Identifying When and How to Get Help	
Preparing for the Workforce:	n.p.	10-11	Information Literacy ●Searching effectively and efficiently	A

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Building a Digital Portfolio (Learn Québec)			●Using good resources ●Making the most of Google ●Evaluating websites and other info ●Citing sources	
Media Smarts	n.p.	K-12	MediaSmarts is a Canadian not-for-profit charitable organization for digital and media literacy. Our vision is that children and youth have the critical thinking skills to engage with media as active and informed digital citizens. **Our Beliefs** • We believe that media are powerful forces in the lives of children and youth, with both positive and negative influences on their social, emotional, intellectual, and physical wellbeing. • We believe that education is one of the best responses to media issues, in order to develop engaged, informed and active citizens. • We believe citizens of all ages have the right to resources and tools to help them develop the knowledge, values and critical thinking skills that are needed to thrive in the global media world. • We believe that responses to media issues must be based on evidence, not emotion. • We believe that educational approaches to digital and media literacy must be grounded in the lived experience of children and youth. • We believe in promoting both rights and responsibilities to guide children and youth in becoming ethical and reflective media users. • We believe in an affirmative approach to developing digital and media literacy skills, one that acknowledges and builds on media's positive, creative and pleasurable dimensions. • We believe that active parental involvement is essential to raising "media smart" children and teens. • We believe in a shared responsibility between the public and private sectors and communities, to ensure that the interests of young people and their families are best served. *(MediaSmarts is a database that features a series of articles and educational resources assisting in the instruction of Digital and Media Literacy. They have a very thorough bank of resources. The grades given for this program have been assigned after reviewing available resources the program offers.)*	A

Source	Page #	Grade(s)	Text from Document	Grade Assigned
			Example: Learning to respect privacy is an important component of the development of digital citizenship. Digital citizenship encompasses all aspects of online life, emphasizing ethical conduct and engagement, particularly when it comes to protecting private information, ensuring safety, and recognizing and managing online bullying, either as a target or a witness. [7] Digital citizenship involves being more aware of social privacy, by realizing the extent of the information that we share, as well as respecting the privacy of others. Youth once understood social networking sites and the Internet as a private space wherein they could communicate with their friends. While they are now fully aware that their actions are watched by parents, teachers, and others, there is still a sense among youth that simply because you *can* access something doesn't mean you *should*. [5] As a result, many youth feel as though their privacy is invaded when parents, teachers, or uninvited observers read or comment on the material they have posted, even though it is posted in a public space. Social privacy issues also involve privacy ethics. Not only is it important to have our privacy respected and protected, it is important to respect and protect the privacy of others. Sexting is an example of a situation where privacy ethics are extremely important.	
Ontario Software Acquisition Program Advisory Committee	n.p.	K-12	*(OSAPAC resources mainly address Digital Citizenship education. However, the grades given for this program have been assigned after reviewing all available resources the program offers.)* Example In an increasingly technology-driven, knowledge-intensive, and globalized world, it is important to prepare our students for success. "In a world that is constantly changing, Ontario students will be better prepared to adapt, achieve and excel, regardless of the challenges they face". (Achieving Excellence: A Renewed Vision for Education in Ontario, 2014). The digital domain is changing how students perceive, interact with, and respond to the world. Innovations in technology have provided new opportunities for learning, both in and out of school, and have enabled students to connect to learning communities around the world. Social media is an immersive environment that can no longer be ignored if schools are to remain relevant. These innovations call for the development of new knowledge, skills and social	A

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			behaviours to ensure these tools are used in responsible and ethical ways.	
Protect Kids Online: The Door Not Locked	n.p.	K-9	*(This Centre operates many different programs which include many various articles and resources which coincide with many of the competencies. They include resources for teachers, parents, students, and cater to various grades and interests while focusing on internet safety and digital citizenship. There is a minimum of 14 programs operated and this list continues to grow. Each of these programs has a series of resources. Grades have been assigned after reviewing resources offered by the Centre.)* <u>Example</u> *Children 8–10 years of age* *Cyberbullying - online harassment* Cyberbullying is a form of bullying that takes place through the use of computers, phones and other devices. It is abusive, targeted, deliberate and repeated behaviour intended to harm another person. And unlike face-to-face bullying, cyberbullying doesn't take a break – kids can be reached with hurtful messages any time of day.	A