

NORTH DAKOTA LIBRARY AND TECHNOLOGY CONTENT STANDARDS

Grades K-12

December 2012



North Dakota Department of Public Instruction
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www.dpi.state.nd.us

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Foreword

**By Dr. Wayne G. Sanstead,
State Superintendent**

There is perhaps no greater responsibility for a community than to provide for the care and education of its citizens. We stand together, committed to the advancement of quality education for all our students. It is toward this aim that I am pleased to issue this document, the *North Dakota Library and Technology Content Standards*. This document represents an important step in defining and implementing what constitutes a quality education for North Dakota citizens.

The State's Protocols for Developing Standards

As a matter of public policy, the North Dakota Department of Public Instruction believes that public education stakeholders must define “what students should know and be able to do.” State law (NDCC 15.1-02-04.3) places responsibility for the writing of state academic standards with the State Superintendent. State law (NDCC 15.1-02-04.4; 15.1-21-08) also places responsibility with the State Superintendent for the supervision of State assessments that are based on the State’s academic standards. To this end, the Department of Public Instruction has worked closely with the State’s educators, through a clearly articulated process, to develop academic standards and aligned assessments that reflect the profession’s best insights into what constitutes a quality education for every citizen. These North Dakota Library and Technology Content Standards will contribute to this effort.

The North Dakota State content standards offer instructional guidance in core curriculum areas, while at the same time, they allow for, indeed *encourage*, a dynamic and living curriculum created at the local school district level. To ensure educational relevance, our state’s content standards are (1) based on academic standards developed nationally by various professional education associations, (2) validated by our state’s best educators based on classroom experience and local community expectations, and (3) widely supported by state and national education policymakers.

While our state’s content standards represent an official, statewide reference point for content and achievement, local school districts are encouraged to use the State’s content standards as guides in the development of local, customized curriculum in the core content areas. Standards-based education requires that we, as a wider education community, agree upon what skills and abilities our students should have to be college or career ready.

The Department seeks to engage educators and community representatives in the development of a valid and reliable educational accountability system. To ensure that the State’s accountability system engenders confidence among constituents, the Department has established a system of prescribed activities that are designed to assure procedural validity and reliability, product quality, and systemic integrity. The Department, with the assistance of educators statewide and national experts, has established a highly interactive process to develop the

state's content standards and assessments that will ensure a high quality education for all of our students.

I encourage all citizens to familiarize themselves with the process used to define, review, and implement the State's challenging content standards. The *North Dakota Standards and Assessment Development Protocols* (refer to the following website: <http://www.dpi.state.nd.us/standard/protocols.pdf>) identify the procedures Department staff and statewide educator design teams follow regarding the staffing, design process, formatting, and content of all documents. These protocols ensure that quality assurance measures are observed and that the process and its resulting product are valid. The *North Dakota Library and Technology Content Standards* document has been developed with care and attention to the requirements of the State standards protocols.

State's Accountability for Every Student

Article VIII of the State's Constitution places a high-level responsibility on the State to ensure the literacy of every citizen. A high-quality education is the right of every student.

Assuring comparable educational opportunity is a primary responsibility of the State's education system. The State's challenging content standards define what students should know and be able to do. In a sense, these standards represent a state contract with our students.

I urge school districts to build their respective curricula upon these worthy standards. A school's curriculum encompasses that collection of textbooks, media, experiences, and instruction that guide a student's exposure to the standards. The standards define the "what" and the curriculum defines the "how" of education.

To hold itself accountable for the educational services it provides through its schools, the State has developed an assessment system that is

North Dakota Library and Technology Content Standards

designed to measure student performance in terms of these State standards within selective subjects or disciplines (i.e., reading/language, arts, mathematics and science). By measuring student achievement in terms of the State's challenging standards, we are able to monitor growth, address deficiencies, and ensure comparability of educational opportunity statewide.

The State's academic assessments are aligned to the State's challenging content standards. The State measures, through a sampling of test questions, the annual performance of students statewide. Results are analyzed based on overall student achievement and on the performance of student subgroups, i.e., students of different ethnic backgrounds, limited English proficient students, economically disadvantaged students, and students with disabilities.

The State issues annual reports on the progress students make toward overall proficiency in terms of the State's standards. I invite all educators and citizens to learn more about the State's Accountability Plan which details this annual report. (Refer to the following website: <http://www.dpi.state.nd.us/grants/NCLB.shtm>.)

I assure you that our State's accountability system exists to protect the interests of every student—every student.

Continuing Tradition of Improvement and Excellence

The legacy of our State's educational system is represented by the quality of the students it graduates every year. Every student who excels and graduates from a North Dakota school testifies to the strength of the families, communities, and schools that nurtured and educated that student.

Yet, as long as there are students who do not meet their full potential or who fail to graduate, then evidence exists for our need to improve. School improvement requires a healthy network of families, communities,

and schools, working together, to achieve the ultimate aim set forth within the State Constitution.

These state standards, by their very nature, define the measure of success we seek to achieve. We cannot summarily claim success as long as any of our students fall below proficiency as defined by our achievement standards. Achieving excellence for every student is our mission. This is why we do what we do. Each and every student, regardless of their standing, is that important.

North Dakota schools embody a long-standing tradition to build on success and improve where necessary. These standards establish our measures for success. These standards anchor us and guide us. If we, indeed, are to continue to improve as an educational system, then it is these standards that will lead us ultimately to our goal. The North Dakota content standards are that important to us all.

Gratitude to a Dedicated Profession

The work of developing and implementing the State's academic content standards finds its origins in many past efforts. The contributions of countless educators have led us to where we are today. It is now for our generation to harvest the best of the past, to incorporate our collective insights based on current research, and to reaffirm our mission for future learners.

I wish to recognize each individual team member and the many evaluators who contributed to the writing of this important document. We must be mindful of the extensive research, analysis, and deliberations that have been invested in this document. Our entire state is grateful for their many contributions.

The work now rests with us as a community, and I am fully confident that we can meet this challenge. The best lies ahead.

A handwritten signature in cursive script that reads "Wayne G. Sanstead".

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Introduction

The North Dakota Library and Technology Content Standards were developed during 2011-2012 by a statewide team of library media and technology specialists, assisted by representatives from the North Dakota Department of Public Instruction and Mid-continent Research for Education and Learning (McREL). Continuing the innovative approach taken by the 2003 writing team, the 2011 content standards integrate technology and library media.

As part of the development process, the standards writing team reviewed standards documents from the essential professional organizations:

- The American Association of School Librarians (AASL)
- The International Society for Technology in Education (ISTE)

The writing team also reviewed relevant content standards from other states as well as various research process models. Library and technology skills are integrated into all curricular areas; therefore, overlap will be found within content standards for other subject areas. This natural overlap provides opportunities for collaboration across curriculum areas.

Purpose of the Document

This document identifies and defines the knowledge and skills necessary for students to be effective users of ideas and information. It emphasizes that employing technology, students need to access, evaluate, and use information to solve problems and think critically. The ultimate goal is that students will be learning *with* information and technology, not learning *about* information and technology. To that end, these standards focus on critical thinking, evaluation, ethical behavior, adaptability, and flexibility.

The purpose of this document is to provide school boards, administrators, educators, parents, and students with a guide for teaching and learning the library media and technology standards. It is not intended to serve as a handbook or a scope and sequence chart; rather, it is a guide to assist with the creation of such materials.

Organization of the Document

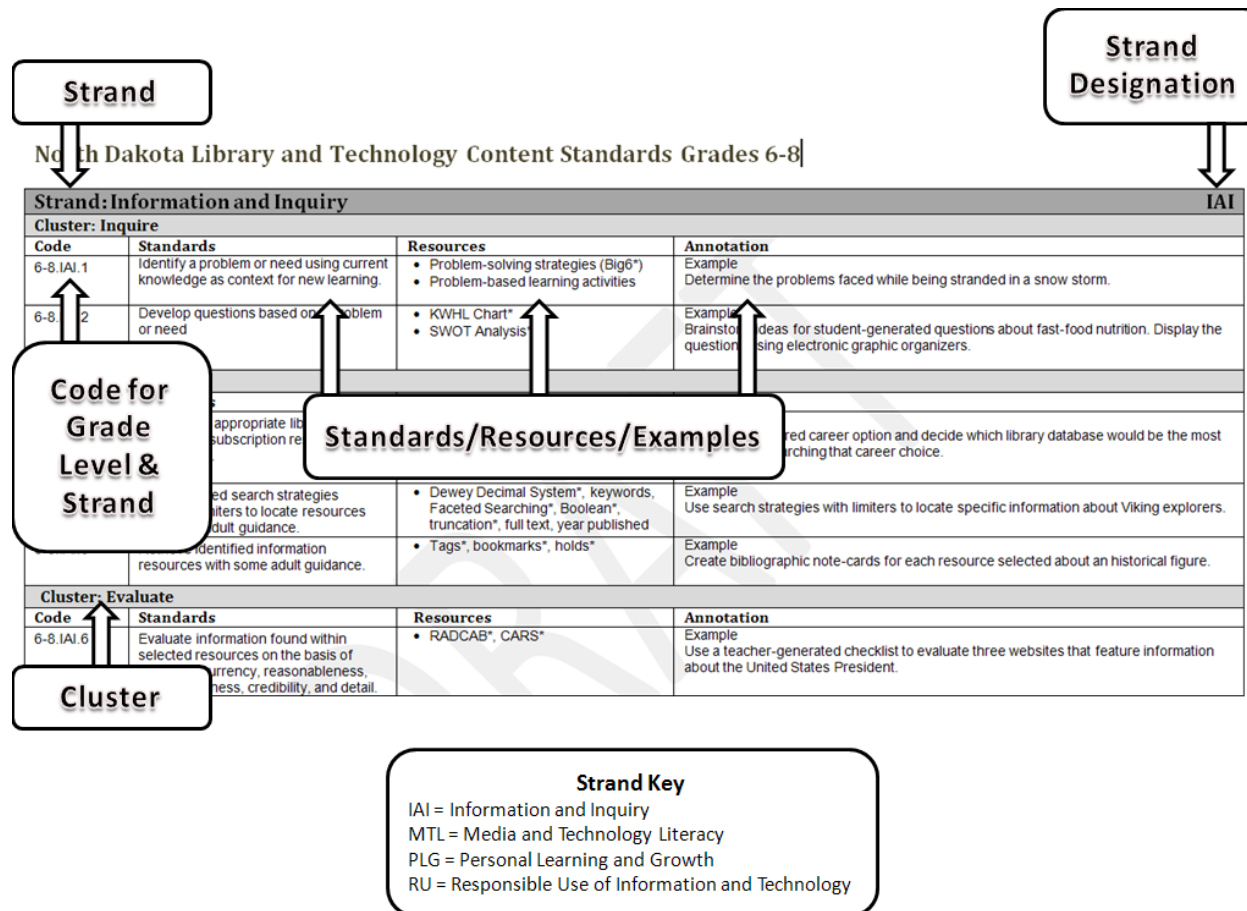
Standards are statements of knowledge and skill that a student should know or be able to do at a given developmental level. This document organizes the library and technology standards into clusters under four strands: Information and Inquiry, Media and Technology Literacy, Personal Learning and Growth, and Responsible Use of Information and Technology. The clusters group standards that are closely related. For example, one of the clusters in the Media and Technology Literacy strand is “Technology Operations and Concepts. Table 1 lists the strands and clusters under which the standards are organized.

Table 1: Strands and Associated Clusters for the Library and Technology Content Standards

Strand	Strand Designation	Clusters
Information and Inquiry	IAI	<ul style="list-style-type: none"> • Inquire • Access • Evaluate • Develop and Share
Media and Technology Literacy	MTL	<ul style="list-style-type: none"> • Technology Operations and Concepts • Creative and Innovative Processes and Products • Communication and Collaboration
Personal Learning and Growth	PLG	<ul style="list-style-type: none"> • Learning Communities • Reading, Listening, and Viewing for Life-long Learning
Responsible Use of Information and Technology	RU	<ul style="list-style-type: none"> • Intellectual Property and Ethics • Digital Citizenship and Safety

The standards are grade-range specific (K-5, 6-8, 9-12) and presented in that way, with a code that identifies the grade range, strand, and standard number. For example, the standard labeled 6-8.RU.5 is in the grades 6-8 grade range under the Responsible Use of Information and Technology strand and is the fifth standard in that strand. The standards are further clarified by an annotation containing examples and resources when appropriate. The annotation listed with each grade-range standard is meant to assist teachers, librarians, and technology specialists with examples of activities that can help students achieve the standards. Annotations for grades K-5 are presented for grades K-2 and 3-5; these examples help teachers understand how the standards might play out in primary versus upper elementary grades. The examples for each grade-range are just that; they are not meant to be exhaustive or the only possibilities. Figure 1 illustrates how to read the presentation of the standards.

Figure 1: Guide to the Standards Presentation



Appendix A presents the standards with all three grade bands on a page. This presentation allows readers to see how knowledge and skills develop across grade bands and is similar to the organization of the North Dakota English Language Arts standards. The document also includes a Glossary and References sections. Terms in the Glossary are marked by an asterisk (*) the first time they appear in the Standards, Cluster, Resources, or Annotation column within each grade band.

Collaboration is Key

The standards are meant to be integrated into the curricula of academic content areas through the efforts of librarians and technology specialists collaborating with other educators. The teacher brings knowledge of the subject content to the collaboration, and the librarian and technology specialist brings knowledge of resources and technology.

North Dakota Library and Technology Standards Grades K-5

Strand: Information and Inquiry			IAI
Cluster: Inquire			
Code	Standards	Resources	Annotation
K-5.IAI.1	State the problem or need for information.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Super3* (Step 1: Think) <p>3-5 Resources</p> <ul style="list-style-type: none"> • Big6* (Step 1: Task Definition) 	<p>K-2 Example</p> <p>Identify a topic about which the student wants to learn (e.g., snakes, dinosaurs). Brainstorm key words for this topic and enter them into an electronic search field with adult guidance.</p> <p>3-5 Example</p> <p>Identify a topic about which the student is learning (e.g., Presidents of the United States). Brainstorm key words for this topic and enter them into an electronic search field.</p>
K-5.IAI.2	List questions based on a problem or need.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • KWHL* chart <p>3-5 Resources</p> <ul style="list-style-type: none"> • KWHL chart 	<p>K-2 Example</p> <p>List who, what, when, where, and "I wonder" questions (simple and complex) about firefighters.</p> <p>As a class, create an online graphic organizer* of questions that could be displayed on interactive whiteboard.</p> <p>3-5 Example</p> <p>Identify one or two research questions (simple and complex) about the student's topic of choice (e.g., What is the importance of Fort Lincoln in North Dakota history?). Create an online graphic organizer of the questions.</p>
Cluster: Access			
Code	Standards	Resources	Annotation
K-5.IAI.3	Recognize and use appropriate library print, digital, and other resources with adult guidance.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Map, globe, dictionary, encyclopedia, and thesaurus • Online databases • Library catalogs • Fiction and nonfiction materials • Parts of a book (i.e., front cover, back cover, spine, title, author, illustrator, publisher, table of contents, index) <p>3-5 Resources tools</p> <ul style="list-style-type: none"> • Map, globe, dictionary, almanac, encyclopedia, and thesaurus • eReader* • Fiction and nonfiction materials • Library catalog 	<p>K-2 Example</p> <p>With assistance, use online maps, directories, web pages and globe models to locate businesses in the community.</p> <p>With assistance, use the library catalog to find and choose a book from the dinosaur section in the library.</p> <p>3-5 Example</p> <p>Use print and digital resources, such as maps and globe models, search engines, encyclopedias, and almanacs, to learn about and trace the journeys of old world explorers.</p>

		<ul style="list-style-type: none"> • Parts of a book (i.e., publisher, copyright*, table of contents, index, glossary, heading, subheading, appendices, captions) • Online databases and references • Parts of a URL* (e.g., domains) • Components of a website (e.g., title, subtitle, heading, subheading, search field, navigation bar, author, copyright, last updated date, contact information, advertisements, links, and site index/map) 	
K-5.IA1.4	Use basic search strategies to locate resources.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Search by: visual, keyword, subject, title, author, and series <p>3-5 Resources</p> <ul style="list-style-type: none"> • Big6 (Step 2: Information-Seeking Strategies and Step 3: Location and Access) • Search by: visual, keyword, subject, title, author, and series • Interlibrary loan 	<p>K-2 Example</p> <p>Use an Internet search engine to find an image of a famous American. Conduct a subject search using the library catalog.</p> <p>3-5 Example</p> <p>Use the Library of Congress web site to find primary sources* on the American Revolution. Locate materials about football by a specific author in the correct reading range.</p>
K-5.IA1.5	Understand library arrangement in order to retrieve identified information resources with adult guidance.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Super3 (Step 2: Do) • Spine label, call number • Dewey Decimal System* <p>3-5 Resources</p> <ul style="list-style-type: none"> • Big6 (Step 3: Location and Access) • Spine label, call number • Dewey Decimal System • Map of the library 	<p>K-2 Example</p> <p>Print an online encyclopedia article about the moon. Locate an identified book from the correct shelf with adult guidance.</p> <p>3-5 Example</p> <p>Use electronic bookmarking to create a list of websites on the solar system. Using the call number, locate and check out a video on rocks and minerals.</p>
Cluster: Evaluate			
Code	Standards	Resources	Annotation
K-5.IA1.6	Evaluate information found within selected resources on the basis of accuracy, currency, reasonableness, and appropriateness.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Reading level tools (Lexile*, Accelerated Reader, Fountas & Pinnell) • Five Finger Rule* <p>3-5 Resources</p> <ul style="list-style-type: none"> • Big6 (Step 4: Use of Information) • reading level tools (Lexile*, Accelerated Reader, Fountas & 	<p>K-2 Example</p> <p>Use the Five Finger Rule to determine readability of a book or web site.</p> <p>3-5 Example</p> <p>Use a checklist to determine the accuracy, currency, reasonableness, and appropriateness of an online article.</p>

		Pinnell) • RADCAB*	
K-5.IA1.7	Modify and implement new search strategies based on information gaps with adult guidance.	K-2 Resources • Super3 (Step 3: Review) 3-5 Resources • KWHL Chart	K-2 Example Compare gathered information with a list of questions to determine what students still need to know. Conduct a search for the missing information. 3-5 Example Compare search results with research questions. Conduct a search for missing information.
Cluster: Develop and Share			
Code	Standards	Resources	Annotation
K-5.IA1.8	Apply new knowledge to curricular areas or real world situations.	K-2 Resources • Video archives, interactive websites* • Reference materials (e.g., state library databases, almanacs, encyclopedias) 3-5 Resources • Video archives, interactive websites* • Reference materials (e.g., state library databases, almanacs, encyclopedias)	K-2 Example Create an electronic daily weather calendar using presentation software. 3-5 Example Use an online calorie counter to calculate lunch calorie intake.
K-5.IA1.9	Organize information using technology and other tools.	K-2 Resources • Print or digital graphic organizers* 3-5 Resources • Big6 (Step 5: Synthesis) • Print or digital graphic organizers*	K-2 Example Create a graphic web illustrating the parts of a plant. 3-5 Example Create an interactive timeline of when states were admitted to the Union.
K-5.IA1.10	Collaborate with others to exchange ideas.	K-2 Resources • Online collaboration tools (e.g., Wiki*, classroom blog*, email, Google sites, video conferencing*) 3-5 Resources • Online collaboration tools (e.g., Wiki*, classroom blog*, email, video conferencing*)	K-2 Example Host a student fair to share what was learned about plant and animal life cycles. 3-5 Example Email students in other states to share state information such as state bird, tree, song, rock.
K-5.IA1.11	Link information and ideas to support a decision or solution.	K-2 Resources • Interactive websites • Print or digital graphic organizers 3-5 Resources • Primary and secondary sources	K-2 Example Create a print or digital flow chart of how an idea becomes a book. 3-5 Example Use an interactive website to create or improve an imaginary planet.

		<ul style="list-style-type: none"> • Interactive websites • Print or digital graphic organizers 	Role-play the decision-making process colonists used to settle at Plymouth Rock.
K-5.IA.12	Evaluate the inquiry process based on a decision or solution.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Super3 (Step 3: Review) • Rubric, checklist <p>3-5 Resources</p> <ul style="list-style-type: none"> • Big6 (Step 6: Evaluation) • Rubric, checklist 	<p>K-2 Example</p> <p>Evaluate the research findings using a rubric or peer review checklist.</p> <p>3-5 Example</p> <p>Evaluate the research findings using an online rubric generator.</p>

Strand: Media and Technology Literacy

MTL

Cluster: Technology Operations and Concepts

Code	Standards	Resources	Annotation
K-5.MTL.1	Define and use grade-appropriate media and technology terminology in context.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Interactive websites • Print and digital dictionary <p>3-5 Resources</p> <ul style="list-style-type: none"> • Interactive websites • Print and digital dictionary 	<p>K-2 Example</p> <p>Use an online interactive game to learn media and technology vocabulary. Create a class media and technology dictionary.</p> <p>3-5 Example</p> <p>Use an online interactive game to learn media and technology vocabulary. Add new terminology to the student's personal vocabulary journal.</p>
K-5.MTL.2	Select, with guidance, the appropriate technology to accomplish a goal.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Age-appropriate software and peripheral devices* <p>3-5 Resources</p> <ul style="list-style-type: none"> • Age-appropriate software and peripheral devices* • Visual and audio websites 	<p>K-2 Example</p> <p>Select the appropriate tool to create visual labels for a word wall.</p> <p>3-5 Example</p> <p>Select the appropriate tool (e.g., presentation software, video and audio clips, spreadsheets) to create a visual presentation.</p>
K-5.MTL.3	Perform grade-appropriate operations using technology to accomplish a goal.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Age-appropriate software and peripheral devices <p>3-5 Resources</p> <ul style="list-style-type: none"> • Age-appropriate software and peripheral devices • Scanning and photo software 	<p>K-2 Example</p> <p>Select and insert clip art to create visual labels for a word wall. Type spelling words using both hands on the keyboard (left hand operates keys on the left and right hand operates keys on the right).</p> <p>3-5 Example</p> <p>Manipulate graphics and text to create a biographical poster. Use keyboarding skills to type a book report.</p>
K-5.MTL.4	Troubleshoot minor technology systems and applications with guidance.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Troubleshooting checklist <p>3-5 Resources</p>	<p>K-2 Example</p> <p>Accurately describe a problem to the teacher (e.g., the monitor turned off).</p> <p>3-5 Example</p>

		<ul style="list-style-type: none"> • Troubleshooting checklist 	Develop a troubleshooting checklist to identify and solve minor technology problems.
K-5.MTL.5	Apply current knowledge to the learning of new technologies.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Age-appropriate software and peripheral devices <p>3-5 Resources</p> <ul style="list-style-type: none"> • Age-appropriate software and peripheral devices 	<p>K-2 Example</p> <p>Apply knowledge of drawing tools used in one program to another program.</p> <p>3-5 Example</p> <p>Apply knowledge of text formatting tools in one program to other programs.</p> <p>Apply knowledge of presentation software to online presentation application.</p>
Cluster: Creative and Innovative Processes and Products			
Code	Standards	Resources	Annotation
K-5.MTL.6	Apply current knowledge to generate new ideas, products, or processes.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Age-appropriate software and peripheral devices • Interactive web sites and white board activities <p>3-5 Resources</p> <ul style="list-style-type: none"> • Age-appropriate software and peripheral devices • Interactive websites and white board activities 	<p>K-2 Example</p> <p>Illustrate an alternative story setting using a drawing program.</p> <p>3-5 Example</p> <p>After learning about the strength of triangles, use an interactive website to create the strongest bridge.</p>
K-5.MTL.7	Create original products by using teacher-selected digital resources, tools, and formats.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Age-appropriate software and peripheral devices <p>3-5 Resources</p> <ul style="list-style-type: none"> • Age-appropriate software and peripheral device 	<p>K-2 Example</p> <p>Use a digital storytelling* program to create a story about the goods and services available in the neighborhood.</p> <p>3-5 Example</p> <p>Create a video that recaps the steps in a scientific investigation.</p>
K-5.MTL.8	Use models and simulations to investigate systems and issues.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Print and digital resources and models • Interactive websites and/or white board activities <p>3-5 Resources</p> <ul style="list-style-type: none"> • Print and digital resources and models • Interactive websites and/or white board activities 	<p>K-2 Example</p> <p>Use an interactive white board activity to identify the sense organs of the human body.</p> <p>3-5 Example</p> <p>Use an interactive website to create models of the various types of volcanoes.</p>
K-5.MTL.9	Recognize past, present, and future technologies.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Interactive websites and/or whiteboard activities 	<p>K-2 Example</p> <p>Using an interactive whiteboard, sort graphics to create a “then, now, and future” class chart to show changes in technology.</p>

		3-5 Resources <ul style="list-style-type: none"> Interactive websites and/or whiteboard activities 	3-5 Example Research a technology invention to determine its evolution through history. Create a digital model to show how it might look and be used in the future.
Cluster: Communication and Collaboration			
Code	Standards	Resources	Annotation
K-5.MTL.10	Use technology to participate and collaborate as a member of a social and intellectual network of learners.	K-2 Resources <ul style="list-style-type: none"> Video conferencing software 	K-2 Example Conduct a class video chat with another class about favorite authors. 3-5 Example Use student email accounts to communicate with a favorite author.
K-5.MTL.11	Use technology to gather and share information with a variety of audiences in ways that others can view, use, and assess.		K-2 Example Share and compare the number of teeth lost via an interactive website. 3-5 Example Create a video book review to post to the school library web page.
Strand: Personal Learning and Growth			PLG
Cluster: Learning Communities			
Code	Standards	Resources	Annotation
K-5.PLG.1	Recognize cultural differences by engaging with people of other cultures.	3-5 Resources <ul style="list-style-type: none"> Culturegrams Video conferencing software Email 	K-2 Example Using a Venn diagram on an interactive whiteboard, compare and contrast fairytales from different cultures. 3-5 Example Become pen pals with a class from another state or country, to share elements of the local culture.
K-5.PLG.2	Recognize that differing opinions exist and respond appropriately.	3-5 Resources <ul style="list-style-type: none"> Digital blog Newspaper editorials 	K-2 Example Read, discuss, and vote electronically on favorite Flicker Tale* book. 3-5 Example Post comments to a teacher-created Flicker Tale* book blog to promote favorite book. Discuss and debate the submissions provided by the class.
K-5.PLG.3	Demonstrate positive behavior and leadership in group roles in both formal and informal situations.		K-2 Example Take various roles when playing games to learn about the library. 3-5 Example Use jigsaw* learning to become experts on the different parts of reference books.
Cluster: Reading, Listening, and Viewing for Life-Long Learning			
Code	Standards	Resources	Annotation
K-5.PLG.4	Demonstrate appreciation and self-motivation as a reader by seeking information for personal learning and	K-2 Resources <ul style="list-style-type: none"> Library databases Card catalog 	K-2 Example Find information on a topic of interest using the online card catalog.

	enjoyment.	<p>3-5 Resources</p> <ul style="list-style-type: none"> • Library databases • Card Catalog 	<p>3-5 Example</p> <p>Identify a preferred hobby and conduct Internet and library research to find a book to learn more about that hobby.</p>
K-5.PLG.5	Identify and respond to various genres, formats, and authors of literature.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • TumbleBooks • Playaways <p>3-5 Resources</p> <ul style="list-style-type: none"> • Playaways 	<p>K-2 Example</p> <p>Record book reviews after reading books from a selection of genres. Create a Venn diagram to compare books by an author.</p> <p>3-5 Example</p> <p>After reading books from a selection of genres, conduct and edit video book reviews.</p>
K-5.PLG.6	Read widely and fluently to make connections with self, the world, and previous learning.		<p>K-2 Example</p> <p>Use a digital drawing application to illustrate a scene from a story that is similar to a real-life experience.</p> <p>3-5 Example</p> <p>Compare the main character of a book to the student's own self, using a digital Venn diagram.</p>
K-5.PLG.7	Make connections between current knowledge and new learning.		<p>K-2 Example</p> <p>Transfer knowledge of alphabetical organization of the easy section to that of the fiction section.</p> <p>3-5 Example</p> <p>Transfer mathematical knowledge of place value to understand the organization of the Dewey Decimal system.</p>
K-5.PLG.8	Display curiosity by pursuing interests through multiple resources.		<p>K-2 Example</p> <p>Add books of interest to an electronic book list.</p> <p>3-5 Example</p> <p>Collect favorite websites about a variety of topics and tag them on a social bookmarking site.</p>
K-5.PLG.9	Determine and select materials appropriate to personal abilities and interests.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • Reading level tools (e.g., Lexile, Accelerated Reader, Fountas & Pinnell) <p>3-5 Resources</p> <ul style="list-style-type: none"> • Reading level tools (e.g., Lexile, Accelerated Reader, Fountas & Pinnell) • Interlibrary loan 	<p>K-2 Example</p> <p>Locate materials at appropriate reading level using search limiters*.</p> <p>3-5 Example</p> <p>Locate materials appropriate for the reading level, age, and topic using search limiters* within the online card catalog.</p>

Strand: Responsible Use of Information and Technology **RU**

Cluster: Intellectual Property and Ethics

Code	Standards	Resources	Annotation
K-5.RU.1	Identify copyrighted works and their proper use.		<p>K-2 Example Locate the copyright information inside of a book. Cite information taken from the Internet by learning to copy and paste web addresses into a word processing document.</p> <p>3-5 Example View a variety of print and digital resources, locate copyright information, and discuss their proper use. Use online bibliography creator to cite sources.</p>
K-5.RU.2	Define and give examples of intellectual property*.		<p>K-2 Example Create and display a personal work that is credited to another student. Discuss the emotion this causes.</p> <p>3-5 Example Create a public service announcement for the school to explain the proper use of materials that are protected by copyright versus those that are part of public domain* or creative commons*.</p>
K-5.RU.3	Describe plagiarism* and its consequences.	<p>K-2 Resources</p> <ul style="list-style-type: none"> • <i>When Marion Copied</i> by Brook Berg • <i>Pirates of Plagiarism</i> by Lisa Downey and Kathleen Fox 	<p>K-2 Example Read a story that emphasizes the consequences of plagiarism.</p> <p>3-5 Example Create a public service announcement for the school to explain the difference and proper use of materials that are protected by copyright versus those that are part of public domain or creative commons.</p>
K-5.RU.4	Demonstrate respect for and proper use of materials and technology.		<p>K-2 Example Create photo posters that demonstrate proper care of technology and library materials.</p> <p>3-5 Example Create a collaborative presentation that demonstrates proper care of technology and library materials.</p>
K-5.RU.5	Comply with Acceptable Use Policies*.		<p>K-2 Example Annually discuss and review a student friendly version of the District Acceptable Use Policy.</p> <p>3-5 Example Annually discuss and review a student friendly version of the District Acceptable Use Policy.</p>
K-5.RU.6	Define and give examples of piracy* and its consequences.		<p>K-2 Example No expectations at this level.</p> <p>3-5 Example</p>

			Locate an online article about a recent incident of piracy and discuss the consequences.
Cluster: Digital Citizenship and Safety			
Code	Standards	Resources	Annotation
K-5.RU.7	Recognize examples of the impact of technology on society.	3-5 Resources <ul style="list-style-type: none"> Digital recorder, laptop, cell phone, tablet 	K-2 Example Participate in a screen-free week and create a class pros and cons list of technology's impact on daily life. 3-5 Example Interview an adult to learn how technology has changed over time and how it has changed his or her life.
K-5.RU.8	Recognize the principles of intellectual freedom*.	3-5 Resources <ul style="list-style-type: none"> <i>Captain Underpants Series</i> by Dav Pilkey <i>Bridge to Terabithia</i> by Katherine Patterson <i>Blubber</i> by Judy Blume <i>Harry Potter Series</i>, J.K. Rowling 	K-2 Example Librarian holds a banned book week and does not allow students to read or check out nonfiction books. Students discuss the importance of free choice in selecting books and materials. 3-5 Example Participate in a teacher/librarian-created trivia contest to investigate where and why books were challenged and/or banned.
K-5.RU.9	Define and use digital etiquette*.	3-5 Resources <ul style="list-style-type: none"> Online gaming, chat rooms, email, texting 	K-2 Example Role play real world manners and relate them to digital etiquette. 3-5 Example Create an online questionnaire about student use of digital etiquette. Graph, share, and discuss results.
K-5.RU.10	Identify safe behaviors in personal electronic communication and interaction.		K-2 Example Create posters promoting awareness of online strangers. 3-5 Example Create an Internet safety brochure to distribute throughout the school and community.
K-5.RU.11	Identify safe and unsafe practices for sharing personal information.	K-2 Resources <ul style="list-style-type: none"> <i>Faux Paw's Adventures in the Internet: Keeping Children Safe Online</i> by Jacalyn Leavitt 	K-2 Examples Participate in an interactive quiz to learn safe and unsafe practices. 3-5 Example Participate in an interactive quiz to learn safe and unsafe practices.
K-5.RU.12	Define cyber bullying and identify prevention strategies.		K-2 Example Write a class song about cyber bullying prevention strategies. 3-5 Example Create a class pledge that promotes cyber bullying awareness and prevention strategies.

North Dakota Library and Technology Content Standards Grades 6-8

Strand: Information and Inquiry				IAI
Cluster: Inquire				
Code	Standards	Resources	Annotation	
6-8.IAI.1	Identify a problem or need using current knowledge as context for new learning.	<ul style="list-style-type: none"> • Problem-solving strategies (Big6*) • Problem-based learning activities 	Example Determine the problems faced while being stranded in a snow storm.	
6-8.IAI.2	Develop questions based on a problem or need	<ul style="list-style-type: none"> • KWHL Chart* • SWOT Analysis* 	Example Brainstorm ideas for student-generated questions about fast-food nutrition. Display the questions using electronic graphic organizers*.	
Cluster: Access				
Code	Standards	Resources	Annotation	
6-8.IAI.3	Select most appropriate library print, digital, and subscription resources from a known list.	<ul style="list-style-type: none"> • State Databases 	Example Identify a preferred career option and decide which library database would be the most helpful for researching that career choice.	
6-8.IAI.4	Use basic search strategies with limiters* to locate resources.	<ul style="list-style-type: none"> • Dewey Decimal System*, keywords, Faceted Searching*, Boolean*, truncation*, full text, year published 	Example Use search strategies with limiters to locate specific information about Viking explorers	
6-8.IAI.5	Retrieve identified information resources with some adult guidance.	<ul style="list-style-type: none"> • Tags*, bookmarks, holds 	Example Create bibliographic note-cards for each resource selected about an historical figure.	
Cluster: Evaluate				
Code	Standards	Resources	Annotation	
6-8.IAI.6	Evaluate information found within selected resources on the basis of accuracy, currency, reasonableness, appropriateness, credibility, and detail.	<ul style="list-style-type: none"> • RADCAB*, CARS* 	Example Use a teacher-generated checklist to evaluate three websites that feature information about the United States President.	
6-8.IAI.7	Modify and implement new search strategies based on information gaps.	<ul style="list-style-type: none"> • KWHL Chart* • Rubric 	Example Develop research questions about Pluto and conduct electronic research to answer the questions. Review information found about Pluto to determine if it answers the initial questions. Modify and implement new search strategies to locate the missing information.	
Cluster: Develop and Share				
Code	Standards	Resources	Annotation	
6-8.IAI.8	Interpret information and apply new knowledge to real world situations.	<ul style="list-style-type: none"> • Video archives, interactive websites* • Reference materials (e.g., state library databases, almanacs, encyclopedias) 	Example Discuss how the spring weather affects the North Dakota growing season after referencing online resources for accessing information.	
6-8.IAI.9	Organize and analyze information using technology and other tools.	<ul style="list-style-type: none"> • Electronic note-taking tools • Print or digital graphic organizers* 	Example Compare and contrast fantasy and science fiction after viewing video clips of both genres.	

6-8.IAI.10	Collaborate with others to exchange ideas and develop new understandings.	<ul style="list-style-type: none"> • Online collaboration tools (e.g., Wiki*, classroom blog*, email, video conferencing*) 	Example Write a short story with a pen pal from a different school collaborating via video conferences and email.
6-8.IAI.11	Explain how information and ideas support a decision or solution.	<ul style="list-style-type: none"> • Print or digital graphic organizers • Presentation software 	Example Show results of a science experiment via electronic presentation.
6-8.IAI.12	Evaluate and reflect on the inquiry process using assessment techniques.	<ul style="list-style-type: none"> • Rubric, checklist 	Example Evaluate a classroom project using an online survey tool.

Strand: Media and Technology Literacy **MTL**

Cluster: Technology Operations and Concepts

Code	Standards	Resources	Annotation
6-8.MTL.1	Define and use grade-appropriate media and technology terminology in context.	<ul style="list-style-type: none"> • Student-response devices 	Example Develop and play a digital vocabulary game that includes media and technology terminology learned in class.
6-8.MTL.2	Select the appropriate technology to accomplish a goal.	<ul style="list-style-type: none"> • Recording tools and editing software 	Example Create a podcast* about a favorite book.
6-8.MTL.3	Perform grade-appropriate operations using technology to accomplish a goal.		Example Attach a document to an email.
6-8.MTL.4	Use a variety of strategies to troubleshoot systems and applications with guidance.		Example Brainstorm solutions for troubleshooting technology issues as they arise.
6-8.MTL.5	Adapt current knowledge to the learning of new technologies.	<ul style="list-style-type: none"> • Online resources 	Example Update and edit an existing document using a new application or online tool.

Cluster: Creative and Innovative Processes and Products

Code	Standards	Resources	Annotation
6-8.MTL.6	Adapt current knowledge to generate new ideas, products, or processes.	<ul style="list-style-type: none"> • Scanner • Photo editing software 	Example Create a digital family tree using a scanner and photo editing software.
6-8.MTL.7	Create unique products and processes by selecting digital resources, tools, and formats for a real-world task.	<ul style="list-style-type: none"> • Desktop publishing software 	Example Use desktop publishing software to create a North Dakota tourism brochure.
6-8.MTL.8	Use models and simulations to investigate and explain systems and issues.	<ul style="list-style-type: none"> • Virtual dissection simulation • Interactive websites and/or white board activities 	Example Explore the circulatory system of frogs using virtual dissection simulation.
6-8.MTL.9	Investigate past, present, and future technology trends and forecast	<ul style="list-style-type: none"> • Internet search engine • Online graphic organizer 	Example Create a timeline of telephone technology and predict future trends.

	possibilities.		
Cluster: Communication and Collaboration			
Code	Standards	Resources	Annotation
6-8.MTL.10	Use technology to participate and collaborate as a member of a social and intellectual network of learners.	<ul style="list-style-type: none"> • Social networking* websites (Twitter) 	Example Communicate with a favorite author.
6-8.MTL.11	Use technology to gather and share information with a variety of audiences in ways that others can view, use, and assess.	<ul style="list-style-type: none"> • Web-based tools* 	Example Develop a class or school blog. Create a web presence to advertise information about an upcoming school event.
Strand: Personal Learning and Growth			PLG
Cluster: Learning Communities			
Code	Standards	Resources	Annotation
6-8.PLG.1	Develop cultural understanding and global awareness by engaging with people of other cultures.	<ul style="list-style-type: none"> • Culturegrams database • Video conferencing software • CIA World Factbook database 	Example Create a podcast of a regional folktale to exchange with students from another region of the United States.
6-8.PLG.2	Use tools to seek out different perspectives to inform thinking and decision-making.	<ul style="list-style-type: none"> • Library databases and card catalog searches • Internet search engine • Points of View database 	Example Identify positive and negative effects of off-shore oil drilling.
6-8.PLG.3	Demonstrate leadership and confidence by presenting ideas to others in both formal and informal situations.	<ul style="list-style-type: none"> • Presentation software 	Example Create a digital presentation for a variety of audiences demonstrating Hello Kitty's influence on Japan.
Cluster: Reading, Listening, and Viewing for Life-Long Learning			
Code	Standards	Resources	Annotation
6-8.PLG.4	Demonstrate appreciation and self-motivation as a reader by seeking information for personal learning and enjoyment.	<ul style="list-style-type: none"> • Library databases • Card catalog 	Example Identify a chosen hobby and find resources with information about it.
6-8.PLG.5	Identify and respond to a variety of genres, formats, and authors of literature.	<ul style="list-style-type: none"> • Playaways • Online audio books 	Example Create and play a genre trivia game using online audio clips and an interactive whiteboard.
6-8.PLG.6	Read widely and fluently to make connections with self, the world, and previous learning.		Example Participate in a summer reading program via a social networking site.
6-8.PLG.7	Transfer current knowledge to new learning.		Example Transfer knowledge of basic search strategies to more complex searches.
6-8.PLG.8	Display curiosity by pursuing interests through multiple resources.		Example Research a favorite childhood object using multiple resources.

6-8.PLG.9	Determine and select materials appropriate to personal abilities and interests.	<ul style="list-style-type: none"> • Reading level tools (e.g., Lexile, Accelerated Reader) • Interlibrary loan 	Example Use various strategies to determine appropriateness and readability of a specific resource.
Strand: Responsible Use of Information and Technology			RU
Cluster: Intellectual Property and Ethics			
Code	Standards	Resources	Annotation
6-8.RU.1	Explain and follow copyright* guidelines.		Example Develop a video that demonstrates proper copyright guidelines.
6-8.RU.2	Identify when citation or permission is needed to use the intellectual property* of others.	<ul style="list-style-type: none"> • Creative Commons* • Citation tools* 	Example Create a travel brochure for North Dakota, correctly citing sources.
6-8.RU.3	Practice strategies to avoid plagiarism* and discuss the personal consequences of plagiarizing the work of others.		Example Participate in an online scavenger hunt, searching for real-life examples of people who have suffered the consequences of plagiarism.
6-8.RU.4	Demonstrate respect for and proper use of materials and technology.		Example Create a classroom procedures policy protecting school resources and publish online to share with the community.
6-8.RU.5	Comply with Acceptable Use Policies*.	<ul style="list-style-type: none"> • District's Acceptable Use Policy 	Example As a class, summarize the district's Acceptable Use Policy.
6-8.RU.6	Identify personal acts of piracy* and discuss the possible consequences.	<ul style="list-style-type: none"> • Presentation software 	Example Create a presentation about the consequences of piracy.
Cluster: Digital Citizenship and Safety			
Code	Standards	Resources	Annotation
6-8.RU.7	Explain the past, present, and possible future impact of technology on society.		Example Research the evolution of an invention and predict how it will change in the future.
6-8.RU.8	Discuss the principles of intellectual freedom*.		Example Discuss how and why the Internet is filtered.
6-8.RU.9	Determine and use appropriate digital etiquette* for a variety of situations.		Example Create skits to model good and bad digital etiquette.
6-8.RU.10	Practice safe and ethical behaviors in personal electronic communication and interaction.	<ul style="list-style-type: none"> • Virtual reality or social network* 	Example Create an online persona in a controlled environment and explore the pitfalls of cyber space.
6-8.RU.11	Apply safe practices for sharing personal information and explain the implications of unsafe practices.		Example Create a brochure for people in the community to provide them with ideas on how to protect their identity online.
6-8.RU.12	Promote cyber bullying awareness and apply prevention strategies.	<ul style="list-style-type: none"> • School policy on bullying • Information on trolling • Movie about cyber bullying 	Example Participate in an open discussion after watching a movie about cyber bullying.

North Dakota Library and Technology Content Standards Grades 9-12

Strand: Information and Inquiry				IAI
Cluster: Inquire				
Code	Standards	Resources	Annotation	
9-12.IAI.1	Assess the problem or need using current knowledge as context for new learning.	<ul style="list-style-type: none"> Inquiry model (Big6*, Scientific Method) 	Example Use electronic mind mapping tools* or other graphic organizers* to brainstorm problems associated with environmental issues.	
9-12.IAI.2	Develop and refine a range of questions based on a problem or need.	<ul style="list-style-type: none"> KWHL Chart* SWOT Analysis* 	Example Develop and refine questions to validate or contest a thesis statement in ecology.	
Cluster: Access				
Code	Standards	Resources	Annotation	
9-12.IAI.3	Select most appropriate library print, digital, and subscription resources from school, academic, and public libraries.	<ul style="list-style-type: none"> Journal article bibliographies to find additional sources North Dakota State Library Library of Congress American Memories Collection 	Examples Use the library catalog, social bookmarking tools*, and subscription databases* to troubleshoot automobile repair. Find primary* and secondary sources to support social studies research.	
9-12.IAI.4	Use advanced and multiple search strategies to locate resources.	<ul style="list-style-type: none"> Index, table of contents, key words and limiters* Basic and advanced searches 	Examples Use the advanced capabilities of search engines to research stem cell technologies. Compare the results provided by subscription databases to those provided by free Internet sources.	
9-12.IAI.5	Retrieve identified information resources independently.	<ul style="list-style-type: none"> Interlibrary loan Photo sharing sites Social bookmarking 	Examples Retrieve current event articles for social studies class. Use online resources to store information for easy retrieval from multiple devices. Retrieve family pictures for a family autobiographical project.	
Cluster: Evaluate				
Code	Standards	Resources	Annotation	
9-12.IAI.6	Evaluate information found within selected resources on the basis of accuracy, currency, reasonableness, appropriateness, credibility, detail, support, and bias within different social and cultural contexts.	<ul style="list-style-type: none"> Evaluation tools (CARS)* 	Examples Use online evaluation tools to review scientific information from multiple sources for accuracy and reliability of data. Evaluate three articles on North Dakota Indians for validity of interpretation.	
9-12.IAI.7	Devise new search strategies based on information gaps and new understanding.	<ul style="list-style-type: none"> Rubric 	Examples Review the information gathered using search strategies and determine if the research question has been answered. Revisit the advanced capabilities of search engines to continue research.	
Cluster: Develop and Share				
Code	Standards	Resources	Annotation	
9-12.IAI.8	Interpret and draw conclusions from information and apply new knowledge	<ul style="list-style-type: none"> Web-based tools* 	Examples Choose the appropriate cell phone package for personal use.	

	to curricular areas and real world situations.		Evaluate career assessments (e.g., PLAN test*) to match personal characteristics with potential careers.
9-12.IAI.9	Organize, analyze, and synthesize information using technology and other tools.	<ul style="list-style-type: none"> Graphic organizers (Venn diagram, mapping, clusters) 	<p>Examples</p> <p>Use electronic note-taking and outlining tools.</p> <p>Develop and support a point of view in a persuasive speech.</p>
9-12.IAI.10	Collaborate with others to exchange ideas, develop new understandings, make decisions, and solve problems.	<ul style="list-style-type: none"> Web-based tools Collaborative role definitions 	<p>Example</p> <p>In small groups, discuss world religions. Use the outcomes of these discussions to contribute to a class Wiki, discussion board, or blog to exchange ideas.</p> <p>Use online survey tools.</p>
9-12.IAI.11	Communicate information and ideas to demonstrate that a pattern of evidence leads to a decision or conclusion.	<ul style="list-style-type: none"> Presentation tools Digital storytelling* rubrics 	<p>Examples</p> <p>Create a presentation to promote self as a political candidate.</p> <p>Participate in a mock town hall meeting and respond to questions from the audience.</p>
9-12.IAI.12	Evaluate and reflect on the inquiry process using assessment techniques and develop strategies for future investigations.	<ul style="list-style-type: none"> Rubric 	<p>Example</p> <p>Submit artifacts to an electronic portfolio*, receive peer feedback, and reflect on the portfolio and the feedback.</p>

Strand: Media and Technology Literacy

MTL

Cluster: Technology Operations and Concepts

Code	Standards	Resources	Annotation
9-12.MTL.1	Define and use grade-appropriate media and technology terminology in context.	<ul style="list-style-type: none"> Screencasting tools 	<p>Examples</p> <p>Create an English-to-Spanish technology dictionary for exchange students.</p> <p>Teach components of web design to peers.</p> <p>Select compatible movie file types.</p> <p>Use file format conversion tools.</p>
9-12.MTL.2	Select the appropriate technology to accomplish a goal.	<ul style="list-style-type: none"> Web-based tools 	<p>Examples</p> <p>Use social media* to advertise a concert.</p> <p>Choose a web-based tool to create a final presentation.</p>
9-12.MTL.3	Perform appropriate operations using technology to accomplish a goal.	<ul style="list-style-type: none"> GPS* Device Screencasting* tools 	<p>Examples</p> <p>Operate a GPS device to locate a geocache*.</p> <p>Operate a camera to contribute to the school video announcements.</p> <p>Create online tutorials to demonstrate new technologies.</p>
9-12.MTL.4	Configure, use, and troubleshoot technology systems and applications.	<ul style="list-style-type: none"> Online tutorials User manuals 	<p>Example</p> <p>Use online tech support as needed to create a digital yearbook.</p>
9-12.MTL.5	Transfer current knowledge to the learning of new technologies.	<ul style="list-style-type: none"> Electronic books and readers Google docs* apps 	<p>Examples</p> <p>Transfer the knowledge of productivity software (e.g., word processing, spreadsheets) to the use of online tools.</p> <p>Apply knowledge of the structure of print materials to navigate ebooks*.</p>

Cluster: Creative and Innovative Processes and Products			
Code	Standards	Resources	Annotation
9-12.MTL.6	Transfer current knowledge to generate new ideas, products, or processes.	<ul style="list-style-type: none"> • Photo editing tools • Web-based tools • Digital cameras 	<p>Examples</p> <p>Use photo editing tools to update a classic movie poster.</p> <p>Survey students about lunch options using an online tool and create a proposal for new menu items using the survey results and federal guidelines.</p>
9-12.MTL.7	Create original products and processes by selecting varied digital resources, tools, and formats for a real-world task.	<ul style="list-style-type: none"> • Application software (e.g., 3-D modeling, spreadsheets) 	<p>Examples</p> <p>Use handheld computing devices to conduct polls on customer satisfaction. Create a spreadsheet to record data.</p> <p>Create an online ad to sell a local product.</p> <p>Use 3-D modeling* software to create backpack organizers.</p>
9-12.MTL.8	Use models and simulations to investigate and explain complex systems and issues.	<ul style="list-style-type: none"> • Interactive websites and/or white board activities 	<p>Examples</p> <p>Participate in a virtual stock market.</p> <p>Take a virtual field trip to the Louvre to investigate characteristics of Renaissance art.</p>
9-12.MTL.9	Analyze past, present, and future technologies.	<ul style="list-style-type: none"> • Web analytics (Google analytics*, Google trends*) 	<p>Examples</p> <p>Use web analytics* to determine which type of business will be the most profitable.</p> <p>Predict the effect of electronic texts on student learning.</p> <p>Explore the feasibility of paperless communities.</p>
Cluster: Communication and Collaboration			
Code	Standards	Resources	Annotation
9-12.MTL.10	Use technology to participate and collaborate as a member of a social and intellectual network of learners.	<ul style="list-style-type: none"> • Video conference tools (e.g., Skype*) • Web-based tools 	<p>Examples</p> <p>Participate in an online book club. Organize and integrate all club member contributions on a wiki*.</p> <p>Seek consensus from a group using a video conference.</p>
9-12.MTL.11	Use technology to gather and share information with a variety of audiences in ways that others can view, use, and assess.	<ul style="list-style-type: none"> • Web-based tools • Video conferencing tools • Digital publishing tools 	<p>Examples</p> <p>Participate in a real-time autopsy via video conferencing.</p> <p>Create a school/class newspaper.</p> <p>Prepare and deliver a speech for an online audience.</p> <p>Share resources using social bookmarking.</p> <p>Use social media to organize a fundraiser.</p>
Strand: Personal Learning and Growth			PLG
Cluster: Learning Communities			
Code	Standards	Resources	Annotation
9-12.PLG.1	Develop cultural understanding and global awareness by engaging with people of other cultures.	<ul style="list-style-type: none"> • Wiki • CIA World Factbook 	<p>Example</p> <p>Collaborate with community leaders to host a cultural fair.</p>

9-12.PLG.2	Gather and evaluate divergent perspectives to support or to change personal opinions.	<ul style="list-style-type: none"> • Opposing Viewpoints database 	Examples Debate a controversial issue, after gathering resources to support both sides. Write a review of opposing political blogs.
9-12.PLG.3	Model leadership and confidence by presenting ideas to others in both formal and informal situations.	<ul style="list-style-type: none"> • Discussion forum • Blog 	Examples Moderate an online discussion forum about a controversial community issue. Write a letter-to-the-editor or respond to a blog post about a controversial community issue.

Cluster: Reading, Listening, and Viewing for Life-Long Learning

Code	Standards	Resources	Annotation
9-12.PLG.4	Demonstrate appreciation and self-motivation as a reader by selecting and using information for personal learning and enjoyment.	<ul style="list-style-type: none"> • Library databases • Card catalog • Online book reviews • e-Readers 	Examples Use a book recommendation website to choose books. Write an online review of a favorite book or author.
9-12.PLG.5	Integrate a variety of genres, formats, and authors of literature into personal reading choices.	<ul style="list-style-type: none"> • Playaways • Google Books • eBooks and online audio books 	Examples Write a review of a graphic novel* that is based on a traditional novel. Write a review that compares a novel to the movie version.
9-12.PLG.6	Read widely and fluently to make connections with self, the world, and previous learning.	<ul style="list-style-type: none"> • Social book catalog (e.g., Shelfari, Library Thing, GoodReads) 	Examples Read magazines that connect to hobbies. Read international newspapers to compare viewpoints on a topic.
9-12.PLG.7	Transfer current knowledge to new learning.		Example Use a new Web-based tool without assistance.
9-12.PLG.8	Display curiosity by pursuing interests through multiple resources.		Examples View a foreign film or travelogue to research overseas travel. Use RSS feeds* to follow blogs of interest.
9-12.PLG.9	Determine and select materials appropriate to personal abilities and interests.	<ul style="list-style-type: none"> • Interlibrary loan • Reading level tools (e.g., Lexile, Accelerated Reader) 	Example Use ODIN to select and request a book from a university library that is at reading level.

Strand: Responsible Use of Information and Technology

RU

Cluster: Intellectual Property and Ethics

Code	Standards	Resources	Annotation
9-12.RU.1	Adhere to copyright* laws when using information in any format.	<ul style="list-style-type: none"> • Open source* (e.g., Creative Commons) • Royalty-free music and image sites 	Examples Follow fair use guidelines* when creating a graduation slideshow. Include citations for images inserted into multimedia products.
9-12.RU.2	Use citation tools and a standard format to ethically reference the intellectual property* of others.	<ul style="list-style-type: none"> • Style manuals (e.g., MLA*, APA*, Chicago*) • Citation tools *(e.g., Word, EasyBib, BibMe, Noodletools) 	Example Use an electronic citation creator to create a works cited page for a sociology paper.
9-12.RU.3	Analyze and revise personal work to avoid plagiarism*.	<ul style="list-style-type: none"> • Plagiarism prevention sites and software (e.g., Turnitin, Easybib) 	Examples Practice summarizing, paraphrasing, and quoting to avoid plagiarism. Draft an English paper and use plagiarism prevention tools to identify potential problem areas. Revise the paper based on the report from the plagiarism prevention site.

9-12.RU.4	Demonstrate respect for and proper use of materials and technology.	<ul style="list-style-type: none"> • Screencasting tools 	Example Make an educational video for elementary school students on using technology appropriately.
9-12.RU.5	Comply with Acceptable Use Policies*.	<ul style="list-style-type: none"> • Examples of acceptable use policies including those for schools and businesses 	Example Rewrite the school's Acceptable Use Policy in student-friendly language.
9-12.RU.6	Avoid piracy by practicing and advocating for the safe, legal, and responsible use of information and technology.	<ul style="list-style-type: none"> • User agreements for file sharing* sites • Digital music 	Example Research court cases on the illegal downloading of music and discuss the implications of using file sharing sites*. Integrate information about responsible use of media into a presentation for other students.
Cluster: Digital Citizenship and Safety			
Code	Standards	Resources	Annotation
9-12.RU.7	Evaluate the past, present, and possible future impact of technology on society.	<ul style="list-style-type: none"> • Web-based tools • Google analytics 	Examples Research the impact of social media on the current political climate. Debate the advantages and disadvantages of the widespread use of and reliance on technology in this context. Use social media tools to investigate positives and negatives for various contexts.
9-12.RU.8	Analyze the principles of intellectual freedom* as a basic tenet of democracy.	<ul style="list-style-type: none"> • American Library Association Banned Book List 	Examples Participate in Banned Book Week activities. Review blogs from authors of diverse perspectives and participate in a panel discussion about freedom of the press.
9-12.RU.9	Use appropriate digital etiquette* in a variety of situations.	<ul style="list-style-type: none"> • Spell check and grammar check 	Examples Compose an email to a professional group using formal, standard English. Post an appropriate comment on a company's social media site (e.g., online newspaper, blog).
9-12.RU.10	Apply safe and ethical behaviors to personal electronic communication and interaction.	<ul style="list-style-type: none"> • Cyber safety websites 	Example Assess risk level of online behaviors among peers.
9-12.RU.11	Advocate and use safe practices for sharing personal information.	<ul style="list-style-type: none"> • Credit reporting websites • Identity theft websites • Social media sites 	Examples Read scenarios to determine if the situation is real or an online scam. Test the safety of online passwords using online tools. Create a "dos and don'ts" list for setting up a personal social media site.
9-12.RU.12	Promote cyber bullying awareness and apply prevention strategies.	<ul style="list-style-type: none"> • Cyber safety websites • Multimedia tools • Digital video equipment 	Examples Create an anti-cyber-bullying campaign to be presented to younger students and to air on a public access channel. Research court cases involving cyber-bullying.

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Glossary

3-D Modeling	The process of developing a mathematical representation of any three-dimensional surface using specialized software
Acceptable Use Policy (AUP)	A written document approved by a school district and/or school board, outlining terms and conditions for student/staff use of school district technology, including the Internet and email
Big 6	An information problem-solving process used in K-12 schools, higher education institutions, and corporate and adult training programs
Blog	An abbreviation for web log; a site where individuals or groups record information and opinions; allows readers to leave comments in an interactive format
Boolean	The use of logical operators such as and, or, if-then, except, and not to further refine a search
CARS	Web evaluation tool – the letters stand for Credibility, Accuracy, Reasonableness, and Support
Citation	A reference to a published or unpublished work; a quote from or reference to another author's work. The abbreviated reference to another author's work in the text of a paper
Citation Tools	Electronic means of automatically generating bibliographic formatting in styles including MLA, APA, and Chicago
Cloud Computing	The practice of using a network of remote servers hosted on the Internet to store, manage, and process data rather than a local server or personal computer
Copyright	A set of exclusive rights granted by a state to the creator of an original work or their assignee for a limited period of time upon disclosure of the work. This includes the right to copy, distribute, and adapt the work. These uses do not grant the right to use the copyrighted work in its entirety. Rather, the use should be limited to quoting, excerpting, summarizing, and making educational copies of the material.
Creative Commons	A website that provides for the creation and legal sharing of digital materials
Dewey Decimal System	A library cataloguing system that classifies materials into 10 major categories
Digital Citizenship	The norms of appropriate, responsible behavior with regard to technology use
Digital Etiquette	A basic set of rules that should be followed to make the Internet a better place
Digital Graphic Organizers	A visual and graphic display which digitally depicts relationships between facts, terms, or ideas within a learning task
Digital Storytelling	Using computer-based tools to create movies and/or slideshows to tell a story
ebooks	Electronic counterpart of a printed book, viewable on a desktop computer, laptop, smartphone or e-book reader. A large number of ebooks can be stored in portable units, reducing weight and volume compared to paper.
Electronic Portfolio	A systematic and organized collection of a student's work, records of observations, and test results, used to assess student progress and often including some form of self-reflection
eReader	A handheld device designed for reading electronic books

Faceted Search	A technique for accessing information that allows users to explore a collection of information by applying multiple filters
Fair Use Guidelines	Copyright law allows for fair use of portions of copyrighted material without permission when used for criticism, comment, news reporting, teaching (including making copies for use in the classroom), scholarship/research, and parody.
File Sharing	The sharing of computer data on a network for the purpose of allowing multiple people to view, write to or modify, copy, and/or print the same file. File sharing is facilitated through sites such as GoogleApps, online course environments, etc.
Five Finger Rule	A procedure that tests the readability of a resource. Students read one page of a resource and hold up a finger for each word they do not know. If all five fingers are up by the time they have read the page, the reading level of the resource is too difficult for the students.
Flicker Tale	Annual award for children's literature presented by the North Dakota Library Association
Geocache	A container that is placed and retrieved according to GPS coordinates
GPS (Global Positioning System)	A satellite-based navigation system
Google Apps	A suite of web-based applications provided by Google
Graphic Novel	Narrative told in the style of a comic book using artwork and text
Graphic Organizers	A visual and graphic display that depicts the relationship between facts, terms, and or ideas
Intellectual Freedom	The right to think freely and to express views even though they may be unpopular or offensive to some (within certain limitations such as libel, slander, etc.)
Intellectual Property	Property such as written works, creative works, and inventions, that derive from efforts of the mind
Interactive Websites	Two way system of electronic information used between a user and a website
Jigsaw	A cooperative learning strategy in which individuals within the group each study different pieces of a topic and then come together to teach one another what they have learned
KWHL Chart	A teaching technique to help students activate prior knowledge. Students recall what they KNOW about a subject; determine what they WANT to learn, HOW they want to learn it, and identify what they LEARN as they research.
Lexile	A measure of reading ability used to match readers with leveled reading resources
Mind Mapping Tools	Tools to create diagrams that show relationships between ideas
MLA/APA/Chicago	Formatting styles used in formal research papers
On-line Public Access Catalog (OPAC)	A computerized library catalog that replaces the card catalog and provides for additional search strategies such as keyword (e.g. Destiny)
Open Source	Software for which the original source code is made freely available and may be redistributed with or without modification
Peripheral Devices	Devices attached to a computer (e.g., mouse, printer)

Piracy	Unauthorized reproduction, distribution, or use of copyrighted material including software, books, recordings, television programs, and movies
Plagiarism	Using another author's words, thoughts, or ideas as one's own
PLAN Test	Measures current academic development and explores career/training options and helps students make plans for their remaining years of high school and beyond
Podcast	A pre-recorded audio program that's posted to a website and is made available for download so people can listen to it on personal computers or mobile devices
Primary Source	A document or physical object that is closest to the person, information, period or idea studied
Public Domain	Information that is not subject to intellectual property rights: copyright, patents, trademarks
RADCAB	An online website evaluation tool that addresses relevancy, appropriateness, detail, currency, authority, bias
RSS Feed	(Really Simple Syndication) a web feed format that provides a way of subscribing to updated online content
Screencasting	A digital recording of computer screen output, also known as a video screen capture, often containing audio narration
Search Limiters	Words or symbols used to refine electronic search results
Secondary Sources	Documents containing information that has been reported, analyzed, or interpreted by individuals who have used primary sources or other secondary sources for data
Skype	A software application that allows users to make voice and video calls and chats over the Internet
Social Bookmarking Tools	Method for Internet users to organize, store, manage and search for bookmarks of resources online
Social Media	Web-based and mobile technologies used to communicate with others
Social Network	An online social structure made up of individuals or groups which are connected by common interests or relationships
Subscription Database	A collection of information that is organized so that it can easily be accessed, managed, and updated
Super 3	An information problem-solving tool used with primary students: plan, do, review (Based on the Big6)
SWOT Analysis	An analysis of an organization's strengths, weaknesses, opportunities, and threats
Tags	A keyword or term assigned to a piece of information (e.g., Internet bookmark, digital image, computer file)
Truncation	Use of symbols to replace letters and words to widen the scope of an electronic search
URL (Universal Resource Locator)	The string of characters in the address line of a browser
Video Conferencing	Interactive telecommunication technologies which allow two or more locations to interact via two-way video and audio transmissions simultaneously

Web Analytics	A tool that generates detailed statistics about visitors to a website
Web-based Tools	Internet tools, such as wikis, blogs, and forums, that enable interactive experiences and make the Internet a medium where interaction plays a more important role than simply accessing information
Wiki	A website developed collaboratively; allows multiple users to edit and add content

Appendix A: Grades K-12 Progression of Content Standards

Strand: Information and Inquiry**IAI****Cluster: Inquire**

Grade K-5 Standards	Grade 6-8 Standards	Grade 9-12 Standards
K-5.IA1.1 State the problem or need for information.	6-8.IA1.1 Identify a problem or need using current knowledge as context for new learning.	9-12.IA1.1 Assess the problem or need using current knowledge as context for new learning.
K-5.IA1.2 List questions based on a problem or need.	6-8.IA1.2 Develop questions based on a problem or need.	9-12.IA1.2 Develop and refine a range of questions based on a problem or need.

Cluster: Access

Grade K-5 Standards	Grade 6-8 Standards	Grade 9-12 Standards
K-5.IA1.3 Recognize and use appropriate library print, digital, and other resources with adult guidance.	6-8.IA1.3 Select most appropriate library print, digital, and subscription resources from a known list.	9-12.IA1.3 Select most appropriate library print, digital, and subscription resources from school, academic, and public libraries.
K-5.IA1.4 Use basic search strategies to locate resources.	6-8.IA1.4 Use basic search strategies with limiters to locate resources.	9-12.IA1.4 Use advanced and multiple search strategies to locate resources.
K-5.IA1.5 Understand library arrangement in order to retrieve identified information resources with adult guidance.	6-8.IA1.5 Retrieve identified information resources with some adult guidance.	9-12.IA1.5 Retrieve identified information resources independently.

Cluster: Evaluate

Grade K-5 Standards	Grade 6-8 Standards	Grade 9-12 Standards
K-5.IA1.6 Evaluate information found within selected resources on the basis of accuracy, currency, reasonableness, and appropriateness.	6-8.IA1.6 Evaluate information found within selected resources on the basis of accuracy, currency, reasonableness, appropriateness, credibility, and detail.	9-12.IA1.6 Evaluate information found within selected resources on the basis of accuracy, currency, reasonableness, appropriateness, credibility, detail, support, and bias within different social and cultural contexts.
K-5.IA1.7 Modify and implement new search strategies based on information gaps with adult guidance.	6-8.IA1.7 Modify and implement new search strategies based on information gaps.	9-12.IA1.7 Devise new search strategies based on information gaps and new understanding.

Cluster: Develop and Share		
Grade K-5 Standards	Grade 6-8 Standards	Grade 9-12 Standards
K-5.IAI.8 Apply new knowledge to curricular areas and real world situations.	6-8.IAI.8 Interpret information and apply new knowledge to real world situations.	9-12.IAI.8 Interpret and draw conclusions from information and apply new knowledge to curricular areas or real world situations.
K-5.IAI.9 Organize information using technology and other tools.	6-8.IAI.9 Organize and analyze information using technology and other tools.	9-12.IAI.9 Organize, analyze, and synthesize information using technology and other tools.
K-5.IAI.10 Collaborate with others to exchange ideas.	6-8.IAI.10 Collaborate with others to exchange ideas and develop new understandings.	9-12.IAI.10 Collaborate with others to exchange ideas, develop new understandings, make decisions, and solve problems.
K-5.IAI.11 Link information and ideas to support a decision or solution.	6-8.IAI.11 Explain how information and ideas support a decision or solution.	9-12.IAI.11 Communicate information and ideas to demonstrate that a pattern of evidence leads to a decision or conclusion.
K-5.IAI.12 Evaluate the inquiry process based on a decision or solution.	6-8.IAI.12 Evaluate and reflect on the inquiry process using assessment techniques.	9-12.IAI.12 Evaluate and reflect on the inquiry process using assessment techniques and develop strategies for future investigations.

Strand: Media and Technology Literacy		MTL
Cluster: Technology Operations and Concepts		
Grade K-5 Standards	Grade 6-8 Standards	Grade 9-12 Standards
K-5.MTL.1 Define and use grade-appropriate media and technology terminology in context.	6-8.MTL.1 Define and use grade-appropriate media and technology terminology in context.	9-12.MTL.1 Define and use grade-appropriate media and technology terminology in context.
K-5.MTL.2 Select, with guidance, the appropriate technology to accomplish a goal.	6-8.MTL.2 Select the appropriate technology to accomplish a goal.	9-12.MTL.2 Select the appropriate technology to accomplish a goal.
K-5.MTL.3 Perform grade-appropriate operations using technology to accomplish a goal.	6-8.MTL.3 Perform grade-appropriate operations using technology to accomplish a goal.	9-12.MTL.3 Perform appropriate operations using technology to accomplish a goal.
K-5.MTL.4 Troubleshoot minor technology systems and	6-8.MTL.4 Use a variety of strategies to troubleshoot	9-12.MTL.4 Configure, use, and troubleshoot technology

applications with guidance.	systems and applications with guidance.	systems and applications.
K-5.MTL.5 Apply current knowledge to the learning of new technologies.	6-8.MTL.5 Adapt current knowledge to the learning of new technologies.	9-12.MTL.5 Transfer current knowledge to the learning of new technologies.

Cluster: Creative and Innovative Processes and Products

Grade K-5 Standards	Grade 6-8 Standards	Grade 9-12 Standards
K-5.MTL.6 Apply current knowledge to generate new ideas, products, or processes.	6-8.MTL.6 Adapt current knowledge to generate new ideas, products, or processes.	9-12.MTL.6 Transfer current knowledge to generate new ideas, products, or processes.
K-5.MTL.7 Create original products by using teacher-selected digital resources, tools, and formats.	6-8.MTL.7 Create unique products and processes by selecting digital resources, tools, and formats for a real-world task.	9-12.MTL.7 Create original products and processes by selecting varied digital resources, tools, and formats for a real-world task.
K-5.MTL.8 Use models and simulations to investigate systems and issues.	6-8.MTL.8 Use models and simulations to investigate and explain systems and issues.	9-12.MTL.8 Use models and simulations to investigate and explain complex systems and issues.
K-5.MTL.9 Recognize past, present, and future technologies.	6-8.MTL.9 Investigate past, present, and future technologies.	9-12.MTL.9 Analyze past, present, and future technologies.

Cluster: Communication and Collaboration

Grade K-5 Standards	Grade 6-8 Standards	Grade 9-12 Standards
K-5.MTL.10 Use technology to participate and collaborate as a member of a social and intellectual network of learners.	6-8.MTL.10 Use technology to participate and collaborate as a member of a social and intellectual network of learners.	9-12.MTL.10 Use technology to participate and collaborate as a member of a social and intellectual network of learners.
K-5.MTL.11 Use technology to gather and share information with a variety of audiences in ways that others can view, use, and assess.	6-8.MTL.11 Use technology to gather and share information with a variety of audiences in ways that others can view, use, and assess.	9-12.MTL.11 Use technology to gather and share information with a variety of audiences in ways that others can view, use, and assess.

Strand: Personal Learning and Growth			PLG
Cluster: Learning Communities			
Grade K-5 Standards	Grade 6-8 Standards	Grade 9-12 Standards	
K-5.PLG.1 Recognize cultural differences by engaging with people of other cultures.	6-8.PLG.1 Develop cultural understanding and global awareness by engaging with people of other cultures.	9-12.PLG.1 Develop cultural understanding and global awareness by engaging with people of other cultures.	
K-5.PLG.2 Recognize that differing opinions exist and respond appropriately.	6-8.PLG.2 Use tools to seek out different perspectives to inform thinking and decision-making.	9-12.PLG.2 Gather and evaluate divergent perspectives to support or to change personal opinions.	
K-5.PLG.3 Demonstrate positive behavior and leadership in group roles in both formal and informal situations.	6-8.PLG.3 Demonstrate leadership and confidence by presenting ideas to others in both formal and informal situations.	9-12.PLG.3 Model leadership and confidence by presenting ideas to others in both formal and informal situations.	
Cluster: Reading, Listening, and Viewing for Life-Long Learning			
Grade K-5 Standards	Grade 6-8 Standards	Grade 9-12 Standards	
K-5.PLG.4 Demonstrate appreciation and self-motivation as a reader by seeking information for personal learning and enjoyment.	6-8.PLG.4 Demonstrate appreciation and self-motivation as a reader by seeking information for personal learning and enjoyment.	9-12.PLG.4 Demonstrate appreciation and self-motivation as a reader by selecting and using information for personal learning and enjoyment.	
K-5.PLG.5 Identify and respond to various genres, formats, and authors of literature.	6-8.PLG.5 Identify and respond to a variety of genres, formats, and authors of literature.	9-12.PLG.5 Integrate a variety of genres, formats and authors of literature into personal reading choices.	
K-5.PLG.6 Read widely and fluently to make connections with self, the world, and previous learning.	6-8.PLG.6 Read widely and fluently to make connections with self, the world, and previous learning.	9-12.PLG.6 Read widely and fluently to make connections with self, the world, and previous learning.	
K-5.PLG.7 Make connections between current knowledge and new learning.	6-8.PLG.7 Transfer current knowledge to new learning.	9-12.PLG.7 Transfer current knowledge to new learning.	
K-5.PLG.8 Display curiosity by pursuing interests through multiple resources.	6-8.PLG.8 Display curiosity by pursuing interests through multiple resources.	9-12.PLG.8 Display curiosity by pursuing interests through multiple resources.	
K-5.PLG.9 Determine and select materials appropriate to personal abilities and interests.	6-8.PLG.9 Determine and select materials appropriate to personal abilities and interests.	9-12.PLG.9 Determine and select materials appropriate to personal abilities and interests.	

Strand: Responsible Use of Information and Technology	RU
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Cluster: Intellectual Property and Ethics		
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Grade K-5 Standards	Grade 6-8 Standards	Grade 9-12 Standards
K-5.RU.1 Identify copyrighted works and their proper use.	6-8.RU.1 Explain and follow copyright guidelines.	9-12.RU.1 Adhere to copyright laws when using information in any format.
K-5.RU.2 Define and give examples of intellectual property.	6-8.RU.2 Identify when citation or permission is needed to use the intellectual property of others.	9-12.RU.2 Use citation tools and a standard format to ethically reference the intellectual property of others.
K-5.RU.3 Describe plagiarism and its consequences.	6-8.RU.3 Practice strategies to avoid plagiarism and discuss the personal consequences of plagiarizing the work of others.	9-12.RU.3 Analyze and revise personal work to avoid plagiarism.
K-5.RU.4 Demonstrate respect for and proper use of materials and technology.	6-8.RU.4 Demonstrate respect for and proper use of materials and technology.	9-12.RU.4 Demonstrate respect for and proper use of materials and technology.
K-5.RU.5 Comply with Acceptable Use Policies.	6-8.RU.5 Comply with Acceptable Use Policies.	9-12.RU.5 Comply with Acceptable Use Policies.
K-5.RU.6 Define and give examples of piracy and its consequences.	6-8.RU.6 Identify personal acts of piracy and discuss the possible consequences.	9-12.RU.6 Avoid piracy by practicing and advocating for the safe, legal, and responsible use of information and technology.

Cluster : Digital Citizenship and Safety		
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Grade K-5 Standards	Grade 6-8 Standards	Grade 9-12 Standards
K-5.RU.7 Recognize examples of the impact of technology on society.	6-8.RU.7 Explain the past, present, and possible future impact of technology on society.	9-12.RU.7 Evaluate the past, present, and possible future impact of technology on society.
K-5.RU.8 Recognize the principles of intellectual freedom.	6-8.RU.8 Discuss the principles of intellectual freedom.	9-12.RU.8 Analyze the principles of intellectual freedom as a basic tenet of a democracy.
K-5.RU.9 Define and use digital etiquette.	6-8.RU.9 Determine and use appropriate digital etiquette for a variety of situations.	9-12.RU.9 Use appropriate digital etiquette in a variety of situations.
K-5.RU.10 Identify safe behaviors in personal electronic communication and interaction.	6-8.RU.10 Practice safe and ethical behaviors in personal electronic communication and interaction.	9-12.RU.10 Apply safe and ethical behaviors to personal electronic communication and interaction.
K-5.RU.11 Identify safe and unsafe practices for sharing personal information.	6-8.RU.11 Apply safe practices for sharing personal information and explain the implications of unsafe practices.	9-12.RU.11 Advocate and use safe practices for sharing personal information.
K-5.RU.12 Define cyber bullying and identify prevention strategies.	6-8.RU.12 Promote cyber bullying awareness and apply prevention strategies.	9-12.RU.12 Promote cyber bullying awareness and apply prevention strategies.