



Recommended Standards for PreK – Grade 12 Information Literacy Skills

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We would also like to acknowledge that the development of these standards was informed by:

- *Standards for the 21st Century Learner*, AASL
- *The Road to 21st Century Learning*:

Policymaker's Guide to 21st Century Skills, Partnership for 21st Century Skills

- *Information Power: Building Partnerships for Learning*, AASL and AECT
- *Massachusetts Technology Literacy Standards and Expectations*, Massachusetts DOESE
- *Big6 Information Literacy Model*, Michael B. Eisenberg and Robert E. Berkowitz

The underlying assumption of these standards is that the only way for learners to develop the skills and dispositions of learning is for them to be given opportunities to construct their own understanding and develop the

skills through guided practice. Library media specialists will want to offer direct instruction on the targeted skill, but then scaffold the learning experience so that students are challenged to perform the skill with guidance and then on their own. Any information processing/research/inquiry model can be used as the structure for the learning process because all of the models have essentially the same phases, as outlined in the standards and indicators themselves.

---Standards for the 21st Century Learner in Action, AASL

The Curriculum Standards Committee of the Massachusetts School Library Media Association: September 2009

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Executive Summary

In the complex technological world of today, education is no longer simply the acquisition of a body of knowledge. It is rather the ability to continually access and use a vast array of information sources. The learner must be able to effectively evaluate these sources, combine them in meaningful patterns and react creatively to the results. For a successfully educated individual, this mode of learning becomes a lifelong habit, since knowledge acquired today may be inadequate tomorrow, while the process of searching out answers, once learned, will be a lifetime skill.

---Rationale for Today's School Library Media Center, MSLA

In 2007 the American Association of School Librarians (AASL) published the Standards for the 21st Century Learner. According to this document, the definition of information literacy has become more complex as resources and technologies have changed. Information literacy has progressed beyond the simple definition of using reference resources to find information. Multiple literacies, including digital, visual, textual, and technological, have now joined information literacy as crucial skills for this century. The continuing expansion of information demands that all individuals acquire the thinking skills that will enable them to learn on their own. The AASL Standards present a broad perspective, going beyond the teaching of information literacy skills to focus on the learning process as a whole by including indicators for the dispositions, responsibilities, and self-assessment strategies that are essential for all learners in the 21st century.

Moving these ideals forward, the Massachusetts Recommended Standards for PreK-12 Information Literacy Skills are designed to support and augment the Guiding Principles, General Standards, and Strands of the Massachusetts Curriculum Frameworks. Library teachers from PreK through grade 12 schools developed the document. The overarching goal of these standards is to outline what information literate students should be able to do in order to use information efficiently, effectively, and ethically to guide learning. School districts can use these recommended standards to ensure that their students are aware of and proficient in using information in all formats.

The Massachusetts Curriculum Frameworks explicitly make the connection between successful mastery of framework content and use of the school library. School library programs can be primary supporters of this educational process, poised as they are on the cutting edge. A qualified school library teacher working in partnership with classroom teachers, school administrators,

parents, and other community members is one of the chief agents of support for students learning 21st century skills. Classroom teachers and library teachers, working together, enhance the delivery of curriculum in our schools today.

The newly-revised Massachusetts English Language Arts Curriculum Frameworks integrates a research strand which requires students to gather information from a variety of sources, analyze and evaluate the quality of the information they obtain, and use it to answer their own questions. Incorporation of the Massachusetts Recommended Standards for PreK-12 Information Literacy Skills ensures that students have command of the tools they need to become effective and ethical users of the vast amount of data and resources available. These skills are a necessary part of contemporary life in the 21st century's global economy.

The Massachusetts Recommended Standards for PreK-12 Information Literacy Skills complement the Massachusetts Instructional Technology Standards and Expectations. School library teachers, as part of their regular practice, teach students web evaluation, use of electronic databases and ethical use of online resources.

In 2007, Massachusetts joined with the Partnership for 21st Century Skills, acknowledging that "every child in America needs 21st century knowledge and skills to succeed as effective citizens, workers and leaders in the 21st century." The Massachusetts Recommended Standards for PreK-12 Information Literacy Skills support the Partnership's recommendations for information and media literacy skills, problem identification, formulation and solution; critical thinking, creativity and intellectual curiosity, along with social responsibility.

Today, school library programs are broadening their scope to provide information access beyond the four walls of the library twenty-four hours a day, seven

days a week. Digital worlds will widen access points for students of the future, and school libraries must be ready to meet those needs. Students are undergoing a rapid transformation from being consumers of information to becoming evaluators and producers of information using collaborative online tools. The need for easy, constant and reliable access to information will change the way school libraries operate throughout the 21st century.

The standards and indicators outlined on the following pages reflect the AASL Standards for the 21st Century Learner, which state that learners must be able to:

- Inquire, think critically, and gain knowledge
- Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge
- Share knowledge and participate ethically and productively as members of our democratic society
- Pursue personal and aesthetic growth

And support these underlying common beliefs:

- Reading is a window to the world.
- Inquiry provides a framework for learning.
- Ethical behavior in the use of information must be taught.
- Technology skills are crucial for future employment needs.
- Equitable access is a key component for education.
- The definition of information literacy has become more complex as resources and technologies have changed.
- The continuing expansion of information demands that all individuals acquire the thinking skills that will enable them to learn on their own.
- Learning has a social context.
- School libraries are essential to the development of learning skills.

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Overview of Grade Spans

The information literacy skills are divided into four age spans:

- PreK to Grade 2
- Grades 3 and 4
- Grades 5 through 8
- Grades 9 through 12

There are several educational philosophies incorporated in the presentation and organization of these information literacy skills. First, regardless of the grade, it is important to remember that students learn information literacy skills best when introduced at the point of need, not in isolation. Jamie McKenzie affirms that we should teach students “just in time” not “just in case” (McKenzie). Constructivist educational theory confirms this; we know that students are much more likely to retain a skill if they learn it when they need to use it, rather than if they learn it just because it is the next thing in the curriculum. When students are actively

engaged in their own learning and are applying new skills to authentic tasks, they are able to connect prior knowledge with new knowledge. In order for this type of learning to take place efficiently and effectively, the school library teacher and the core classroom teachers need to be able to communicate on a regular and frequent basis as they prepare lessons and projects together. Therefore, a school library with reliable print and electronic resources, which supports curriculum initiatives, must be accessible to all users during regular school hours.

Also, the skills outlined in this document are cumulative. Students must develop a familiarity and literacy with information at an early age so that as they get older and are capable of more abstract thinking, the basic skills are second nature. For example, if high school students do not know how to search an

online library catalog, a skill that should be practiced and developed at a younger age, they are unlikely to be able to search online databases effectively. If fourth grade students do not learn to use a teacher selected essential question to develop a topic focus, they will find it very difficult to develop their own thesis statement in high school. If students do not have the opportunity to learn the basic skills when they are young, they will be at a disadvantage when they are older.

Therefore, this presentation of information literacy skills is predicated on the assumption that they will be introduced at every grade level in authentic lessons and projects, and that they are integrated directly within the core classroom content as they become relevant to the students’ learning.

PreK to Grade 2

Beginning information literacy skills for this age group is crucial. While many students in this grade span are not readers at all, others are only at the beginning stages of “learning to read”. The groundwork for later skills must be laid, even at this young age. It is developmentally appropriate for students in the lower elementary grades to be able to do the following: ask relevant questions; recognize when information is needed; describe what kinds of information can be used to solve a problem; recognize the differences between fiction and non-fiction; begin to be able to find resources independently in a library; sort information in meaningful ways; communicate new information that they have learned; evaluate their own information processes as well as their final products; and be able to verbalize basic elements of stories.

Grade 3 to 4

The students at these grade levels are making a critical transition from “learning to read” to “reading to learn.” Information literacy skills at this point correspond to their newly acquired reading skills and their greater capacity for critical thinking. They should practice making connections, within literature, as well as with words. For example, they should be able to plan a search strategy for information by using keywords to help find the information using various sources such as a book index, a library catalog or an online site. Students should be able to synthesize information to organize and produce new meaning.

Grade 5 to 8

By fifth grade students are now reading information to learn. They are developing abstract thinking skills and information literacy skills that build on this ability. By the end of eighth grade they should be familiar with various internet search strategies and how to use them, and they begin to evaluate information that they find. In addition, they can evaluate their own research process and product, and explain the ethical use of information. If provided regularly with authentic learning experiences in a resource-based environment, eighth-graders become fluent in information literacy skills.

Grade 9 to 12

The information literacy skills delineated for this age group further develop the skills from earlier stages, but are more in depth and focus more on student independence. As they prepare to go to college, the world of work and beyond, students should be critical thinkers and independent information users. They must be able to ask relevant questions to answer a broader question and be familiar with the range of information sources available to them. In addition, they need to be able to recognize authority, bias, opinion, and relevance, regardless of the type of information source. They must know how to develop a search strategy and be able to change the strategy if it isn't working. They understand both the possibilities and the limitations of various internet-based resources. They know how to use information ethically, and are able to work both individually and collaboratively.

Conclusion

The ultimate goal of a school library program is to help students find, evaluate, synthesize, present and produce information efficiently, effectively and ethically. The objective of The Massachusetts Recommended Standards for PreK-12 Information Literacy Skills is to assist school districts in focusing on developmentally-appropriate skills that will lead to students becoming life-long readers and learners who contribute positively to a global society.

MSLA PreK – Grade 12 Information Literacy Skills Standards

The Recommended PreK – Grade 12 Information Literacy Skills Standards fall under eight broad categories:

Standard 1. Define an Information Task

Students will be able to define problems competently and identify information needs.

Standard 2. Develop Information Seeking Strategies

Students will be able to develop strategies to find information relevant to their question or personal need.

Standard 3. Locate and Access Information

Students will be able to access and gather information efficiently and effectively.

Standard 4. Use Information

Students will be able to evaluate resources for their appropriateness, select the best and extract the most relevant information.

Standard 5. Synthesize Information

Students will organize new information from multiple sources to construct a product that communicates the results of their research

Standard 6. Participate in Collaborative Activities

Students will participate effectively in groups to pursue and generate information.

Standard 7. Evaluate the Process and the Product

Students will evaluate both the research process and the final product. This may include both self and peer evaluation.

Standard 8. Appreciate Literature

Students will gain an increased enjoyment of literature and grow in their abilities to locate and select appropriate reading materials independently.

Information Literacy Skills Performance Indicators

Standard 1. Define an Information Task.

Students will be able to define problems competently and identify the needed information.

Grade Level	Performance Indicator
PreK-2	By the end of second grade, students will be able to:
	1.1 Ask a question that requires information seeking.
	1.2 Rephrase the classroom assignment: What am I supposed to do?
	1.3 Identify existing knowledge and, with assistance, areas where more information is needed. Example: complete a topic chart, "What I Know," "What I Think I Know," "What I Need to Find Out."
	1.4 Brainstorm additional questions to answer in solving an information problem.
3-4	By the end of fourth grade, students will continue to work on previous standards as necessary and will also be able to:
	1.5 With assistance, list the criteria for a research assignment.
	1.6 Demonstrate overall understanding of the final product, e.g., "I need to create a multimedia presentation, poster, essay, etc."
	1.7 Use the teacher selected essential question to develop a topic focus, e.g., "Why do leaves turn different colors in the fall?"
	1.8 Gather background information by reading, viewing or listening to a variety of pre-selected and self-selected resources.
	1.9 As a class, develop a student driven essential question.
	1.10 Identify existing knowledge as well as additional information necessary to solve the problem.
5-8	By the end of the eighth grade, students will continue to work on previous standards as necessary and will also be able to:
	1.11 Understand the criteria for the research assignment.
	1.12 Explain what the final product will look like.
	1.13 Select a topic from a range of possibilities.
	1.14 Use the teacher provided essential question to develop a topic focus, or develop a self-selected essential question.
	1.15 With assistance, develop a thesis statement.
	1.16 Identify pre-existing knowledge, as well as additional information necessary to solve the problem.
	1.17 Read, listen, and watch from all relevant and appropriate sources to gain an overview of the topic.
9-12	By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:
	1.18 Independently select a topic.
	1.19 Develop an essential question to answer.
	1.20 Skim/read all sources to provide background information and generate subsidiary questions.
	1.21 Develop a thesis statement, demonstrating a particular point of view.

Standard 2. Develop Information Seeking Strategies.

Students will be able to develop strategies to find information relevant to their question or personal need.

Grade Level	Performance Indicator
PreK-2	By the end of second grade, students should be able to:
	2.1 Exhibit proper respect for and care of library materials, facilities, and equipment.
	2.2 Understand the layout and organization of the library.
	2.3 Understand and follow library rules and procedures.
	2.4 Identify the parts of a book, e.g., spine, spine label, cover, title, page, verso page, barcode, if library is automated.
	2.5 Explain the difference between fiction and non-fiction.
	2.6 Recognize which resources are the best to use and why.
	2.7 Web or map a topic based on prior knowledge and preliminary background information.
	2.8 Develop a strategy to solve an information problem, e.g., Plan-Do-Review (Big6™).
3-4	By the end of fourth grade, students will continue to work on previous standards as necessary and will also be able to:
	2.9 Identify and use parts of a book to gather information: copyright, publisher, table of contents, index, glossary, etc.
	2.10 Explain that there are different types of resources that can be used for different purposes: books, databases, periodicals, pre-selected class websites, reference materials such as dictionaries, encyclopedias, thesauruses, almanacs, etc.
	2.11 Identify key words to find information on a topic.
	2.12 With assistance, use the online catalog to find information sources in the school library.
	2.13 Web, map, or diagram a main topic with sub-topics.
	2.14 Develop a strategy for finding relevant information, including a variety of types of resources.
5-8	By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to:
	2.15 Understand the library's organization of resources.
	2.16 With assistance, select and modify keywords and phrases for information seeking purposes.
	2.17 Understand the difference between, and the uses of, primary and secondary sources
9-12	By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:
	2.18 Use a strategy for finding relevant information from a variety of resources, shifting the strategy as necessary, based on availability and relevance.
	2.19 Assess the value of various types of electronic resources for data gathering, including databases, internet sites, e-books, community and government resources.
	2.20 Independently develop keywords and phrases to search for information.
	2.21 Use information sources of all types to explore a topic.
	2.22 Narrow or expand a topic based on preliminary searching.
	2.23 Select primary and secondary sources as appropriate.

Standard 3. Locate and Access Information.

Students will be able to access and gather information efficiently and effectively.

Grade Level	Performance Indicator
PreK-2	By the end of second grade, students will be able to:
	3.1 Independently locate library staff and navigate the library's physical space.
	3.2 Independently approach the library teacher for assistance.
	3.3 Understand that there is a relationship between spine label and book content and independently locate fiction and non-fiction sections in the school library.
3-4	By the end of fourth grade, students will continue to work on the previous standards as necessary and will also be able to:
	3.4 Understand the roles of the library teacher and library staff.
	3.5 Understand the organization of the library media center.
	3.6 Use the library catalog to locate information sources.
	3.7 With assistance, choose appropriate information sources.
	3.8 With assistance, find information from maps and charts.
	3.9 Explore and develop understanding of how to gather information, including the use of table of contents, index, and glossary.
5-8	By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to:
	3.10 Independently choose appropriate information from print and electronic sources.
	3.11 Use cross-references to locate additional information.
	3.12 Recognize inadequacies or gaps in information.
9-12	By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:
	3.13 Independently develop and implement an information search strategy.
	3.14 Select the best sources for the information need.

Standard 4. Use Information

Students will be able to:

- 4a. evaluate resources for their appropriateness
- 4b. select the best and most relevant information
- 4c. practice ethical behavior and respect for intellectual property rights

4a. Evaluation for Appropriateness

Grade Level	Performance Indicators
PreK-2	By the end of second grade, students will be able to: 4.1 Distinguish fiction from non-fiction.
3-4	By the end of fourth grade, students will continue to work on previous standard as necessary and will also be able to: 4.2 With assistance, develop criteria for relevant information, including authority, accuracy, objectivity, relevancy, and currency of source. 4.3 Compare and contrast information from different sources.
5-8	By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to: 4.4 Independently develop criteria for relevant information, including authority, accuracy, objectivity, relevancy, and currency of source. 4.5 Independently discriminate between primary and secondary sources.
9-12	By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to: 4.6 Practice independent critical thinking when reviewing a potential information source by: <ul style="list-style-type: none">• distinguishing between verifiable facts and opinion• detecting bias• identifying the purpose• distinguishing between relevant and irrelevant information recognizing inconsistencies or false claims

4b. Extraction of Most Relevant Information

Grade Level	Performance Indicators
PreK-2	By the end of second grade, with assistance, students will be able to: 4.7 Sort, classify and sequence pieces of information, e.g., place events along a timeline, sort families of animals, etc.
3-4	By the end of fourth grade, students will continue to work on previous standard as necessary and will also be able to: 4.8 Take notes using guided research forms to extract relevant information. 4.9 Use provided graphic organizers and outlines to organize information logically.

	4.10	With assistance, choose appropriate order for information, e.g., chronological, alphabetical, topical, etc.
	4.11	With assistance, summarize and paraphrase information in own words.
5-8	By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to:	
	4.12	Independently take notes.
	4.13	Independently summarize and paraphrase information.
	4.14	Choose appropriate order for information, e.g., chronological, alphabetical, hierarchical in terms of importance, persuasive position.
	4.15	Make inferences from data.
	4.16	Collaborate with others, including using technology to share information.
9-12	By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:	
	4.17	Gather information to support a point of view in persuasive writing.

4c. Ethical Behavior in Information Use

Grade Level	Performance Indicators	
PreK-2	By the end of second grade, students will be able to:	
	4.18	Indicate the source of information.
3-4	By the end of fourth grade, students will continue to work on previous standard as necessary and will also be able to:	
	4.19	Define plagiarism.
	4.20	Using a provided format, create correct citations for text and images.
	4.21	Adhere to the provisions of the school's Acceptable Use Policy.
5-8	By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to:	
	4.22	Independently create correct citations for text and images used.
	4.23	With assistance begin to demonstrate understanding of copyright law, e.g., fair use and intellectual property rights.
9-12	By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:	
	4.24	Demonstrate legal and ethical behaviors among peers, family and community regarding the use of technology and information.
	4.25	Demonstrate understanding of copyright law.

Standard 5. Synthesize Information

Students will organize new information from multiple sources to construct a product that communicates the results of their research.

Grade Level	Performance Indicators
PreK-2	By the end of second grade, students will be able to:
	5.1 Create and share developmentally appropriate text and images with others.
	5.2 Use new information in the final product.
	5.3 With assistance, present a final product using an appropriate format: report, poster, electronic program, or other medium.
3-4	By the end of fourth grade, students will continue to work on previous standards as necessary and will also be able to:
	5.4 With assistance, consider the purpose and audience for the product and/or presentation.
	5.5 Organize the information in a way that is appropriate for the assignment, project, or question.
	5.6 Present a final product using an appropriate format: report, poster, electronic program, web page or other medium of communication.
5-8	By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to:
	5.7 Use appropriate medium to produce an original product to communicate research results.
	5.8 Collaborate with peers in sharing information.
	5.9 Understand that communicating information is a life long skill.
9-12	By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:
	5.10 Consider the purpose and audience for the product and/or presentation.
	5.11 Select an appropriate media format to communicate new understandings and new knowledge.
	5.12 Create a storyboard, script, layout or rough draft of research notes.
	5.13 Use appropriate editing, dictionary and thesaurus tools to produce a polished, original product that clearly communicates research results.

Standard 6. Participate in Collaborative Activities

Students participate effectively in groups to pursue and generate information.

Grade Level	Performance Indicators
PreK–2	By the end of second grade, students will be able to:
	6.1 Demonstrate appropriate group conduct (take turns speaking, respect opinions, use library voice).
	6.2 Listen to the information and ideas of others.
	6.3 Cooperate with others and share resources.
	6.4 Work with other students to create and evaluate simple information products.
	6.5 Assist other students with book selection.
3–4	By the end of fourth grade, students will continue to work on previous standards as necessary and will also be able to:
	6.6 Exhibit an understanding of the rights of other library users.
	6.7 Work cooperatively with others and share resources and materials.
	6.8 Discuss information and ideas with others, listen well and reformulate ideas when appropriate.
	6.9 Use information sources, select information and ideas that will contribute directly to the success of group projects.
	6.10 Respect others' ideas and backgrounds and acknowledge their contributions.
	6.11 Encourage consideration of ideas and information from all group members.
	6.12 Participate actively in group discussions to analyze information products and solutions.
	6.13 Collaborate with others to design, develop and evaluate information products and suggest solutions.
5–8	By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to:
	6.14 Use provided guidelines and the group's work to improve content and delivery.
9–12	By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:
	6.15 Integrate their own knowledge and information with that of others in the group.
	6.16 Actively listen to and respectfully respond to the point of view of others.
	6.17 Collaborate with others to lead, facilitate, negotiate and otherwise participate in defining the information needs of a group.
	6.18 Participate actively in group discussions to devise solutions to information problems that integrate group members' information and ideas.
	6.19 Work to move the group to consensus after substantive conversations and sharing of information and ideas among all the members of the group.
	6.20 Help organize and integrate the contributions of all the members of the group into information products.
	6.21 Work with others to create and evaluate complex information products that integrate information in a variety of formats.
	6.22 Participate effectively as a member of a group in evaluating the content and delivery of its work and the effectiveness of the group's work habits.

Standard 7. Evaluate the Process and the Product

Students will evaluate both the research process and the final product. This may include both self and peer evaluation.

Grade Level	Performance Indicators
PreK-2	By the end of second grade, students will be able to:
	7.1 Use a provided checklist or rubric to determine that project is complete and accurate.
	7.2 Judge the process by asking questions, e.g., What did I like? What was easy? What was difficult? How can I do it better next time?
	7.3 Judge the product by asking questions, e.g., Did I complete all the steps required by my teacher? What have I learned? How can I improve my final product? If I had to do it over again, what would I do differently?
3-4	By the end of fourth grade, students will continue to work on previous standards as necessary and will also be able to:
	7.4 Conference with peers, teachers, and library teacher during the creation of the product and in final product evaluation.
5-8	By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to:
	7.5 Analyze the evaluation results to improve their communications through developing evaluation criteria and doing self and peer evaluations.
	7.6 With assistance, describe the ethical use of information.
	7.7 Use critical and creative thinking skills to analyze, synthesize and evaluate relevance, reliability, and authority of sources.
	7.8 Using predetermined criteria, evaluate the effectiveness of the communication of research results.
	7.9 Review and evaluate the process of transforming information into knowledge.
	7.10 Summarize new knowledge gained through peer presentations.
9-12	By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:
	7.11 Voluntarily apply legal principles and ethical conduct related to information technology such as: copyright, plagiarism, privacy, online etiquette, acceptable use of resources.

Standard 8. Appreciate Literature

Students will gain an increased enjoyment of literature and grow in their abilities to locate and select appropriate reading material independently.

Grade Level	Performance Indicators
PreK-2	By the end of the second grade, students will be able to:
	8.1 Understand the importance of the library as an information source.
	8.2 Demonstrate active listening skills.
	8.3 Listen to literature for pleasure and information.
	8.4 Use illustrations to acquire a greater understanding of the story.
	8.5 Use the library collection for pleasure reading.
	8.6 Understand the difference between an author and an illustrator.
	8.7 Demonstrate comprehension of a story heard, read or viewed through verbal discussion and/or written responses or artwork.
	8.8 Share books by favorite authors and illustrators.
	8.9 Identify book award winners, e.g., Caldecott, Newbury, Coretta Scott King Awards.
3-4	By the end of fourth grade, students will continue to work on previous standards as necessary and will also be able to:
	8.10 Recognize various genres of literature.
	8.11 Demonstrate awareness of literature from various cultures and genres, e.g., fairy tales, folklore, myths and legends, poetry.
	8.12 Make connections among materials read, heard or viewed.
	8.13 Make predictions in literature.
	8.14 Recognize basic story elements: character, setting and conflict.
5-8	By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to:
	8.15 Incorporate critical and creative thinking skills to evaluate literary elements and conventions.
	8.16 Display knowledge of various types of print material, of genres, and of selection aids.
	8.17 Identify and read from a variety of genres, e.g., historical, realistic, fantasy, fiction, folklore, poetry, biography, nonfiction.
	8.18 Recognize reading as a lifelong pursuit.
	8.19 Recognize characteristic styles of various authors and illustrators.
9-12	By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:
	8.20 Identify award-winning books, their selection criteria, and attributes.
	8.21 Perform preliminary research to enhance appreciation of literature.
	8.22 Demonstrate an understanding of the characteristics of the different literary genres, including: fantasy, folklore, poetry, drama, biography, short stories, science fiction, historical fiction, realistic fiction, humor, etc.

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Appendix I: Integrated Learning Scenarios

Grade 2: Habitats - Minibeast Homes

SCENARIO:

This collaborative project is intended to identify the ways in which an organism's habitat provides for its basic needs (plants require air, water, nutrients, and light; animals require food, water, air and shelter). During the unit on habitats, the library teacher and the classroom teacher meet to plan this lesson. One or both of the teachers tells the students that they will be planning a "minibeast"¹ zoo. Students will decide what minibeast to include in their zoo and what kind of habitats the minibeast will need.

LIBRARY LESSON(S):

The classroom teacher will introduce the lesson with a discussion on zoos and inform the students that they will plan a minibeast zoo. Ideally, this lesson could be taught after the students have had a field trip to a zoo. Students will come to the library media center and brainstorm with the classroom teacher and the library teacher what minibeasts to include in their zoo and what kind of habitats the minibeasts will need. After the list of the minibeasts has been compiled, the students will pick out one minibeast and find out about its natural habitat. Students will design homes for their minibeasts and draw and illustrate them on poster board to put on display in the classroom or the library media center. The research on the minibeasts will take 2-6 days depending on the ability of the students. The drawing of the habitats will take two days. The lesson can take from one week to two weeks. If the library teacher is not on a flexible schedule, the lesson will take longer because the research will be limited to when the class has its scheduled class library visit.

ASSESSMENT

Students will be taught how to use a simple science encyclopedia, an online

encyclopedia, and nonfiction books found using the online catalog. Students will be guided in finding and recording information on a provided Minibeast Notetaking Form. Students will:

1. Gather and/or read information on minibeasts from a variety of sources, including the classroom, library media center, and the public library.
2. Determine which resources are best to use and tell why.
3. Web or map a minibeast from background information and preliminary searching.
4. Sort and select materials on a specific minibeast.
5. Browse through magazines and books for visual information.
6. Skim through an easy informational book to find facts about the minibeast.
7. Read, view or listen for relevant information.
8. Orally, contribute new information to the understanding of the topic.
9. Relate details to the topic in a sentence or paragraph.

Extensions and Modifications

- a. Students will draw/illustrate their minibeasts in their natural habitat. Students will also be given the option to create dioramas.
- b. Students will be asked to discuss which sources they liked using and which were most useful. Students will be asked what they learned about minibeasts and their habitats.

INSTRUCTIONAL STRATEGIES

Key Concepts

What are the key components of a natural habitat?

Specific Skills

Students will be able to:

1. Rephrase the classroom assignment. What am I supposed to do?
2. List some types of resources on the topic that might be helpful.
3. Complete a topic chart. What I know, What I think I Know, What I need to find out
4. Brainstorm questions about the topic.
5. Gather background information by reading, viewing or listening to a variety of sources including the classroom, the library media center and the public library.
6. Determine which resources are the best to use and tell why.
7. Web or map a topic from background information and preliminary searching.
8. Recognize the online catalog as a tool for locating media center materials.
9. Skim through an easy informational book to find something specific.
10. Understand the procedures for use of library media center materials.

INFORMATION LITERACY SKILLS PERFORMANCE INDICATORS

Standard 1: Define the information task

Skills Indicator(s):

- 1.1 Ask a question that requires information seeking
- 1.2 Rephrase the classroom assignment: What am I supposed to do?
- 1.4 Brainstorm additional questions to answer in solving an information problem.

¹Wikipedia defines a minibeast as "a variety of arthropods and other invertebrates, including but not limited to spiders, ants, butterflies, bees, wasps, flies, woodlice, and many others".

Standard 2: Develop information-seeking strategies

Skills Indicator(s):

- 2.1 Exhibit proper respect for and care of library materials, facilities & equipment.
- 2.3 Understand and follow library rules and procedures.
- 2.6 Recognize which resources are the best to use and why.
- 2.7 Web or map a topic based on prior knowledge and preliminary background information.
- 2.8 Develop a strategy to solve an information problem, e.g., Plan-Do-Review (Big6TM) .

Standard 3: Locate and access information

Skills Indicator(s):

- 3.1 Independently locate the library staff and navigate the library's physical space.
- 3.2 Independently approach the library teacher for assistance.
- 3.3 Understand that there is a relationship between spine label and book content and independently locate fiction and non-fiction sections in the school library.

Standard 5: Synthesize information

Skills Indicator(s):

- 5.1 Create and share developmentally appropriate text and images with others.
- 5.2 Use new information in the final product.
- 5.3 With assistance, present a final product using an appropriate format: report, diorama, poster, software program, or other medium of communication.

Standard 7: Evaluate

- 7.2 Judge the process by asking questions, e.g., What did I like? What was easy? What was difficult? How can I do it better next time?
- 7.3 Judge the product by asking questions, e.g., Did I complete all the steps required by my teacher? What have I learned? How can I improve my final product? If I had to do it over again, what would I do differently?

CONNECTION TO MASSACHUSETTS CURRICULUM FRAMEWORK STANDARDS

English Language Arts

- 1.1 Follow agreed-upon rules for discussion (raising one's hand, waiting one's turn, speaking one at a time).
- 2.1 Contribute knowledge to class discussion in order to develop a topic for a class project.
- 7.4 Demonstrate understanding of the various features of written English.
- 8.4 For informational/expository texts: Make predictions about the content of a text using prior knowledge and text features (title, captions, illustrations) .
- 8.5 For informational/expository texts: Retell important facts from a text heard or read.
- 13.1 Identify and use knowledge of common textual features (title, heading, captions, key words, table of contents)
- 13.2 Identify and use knowledge of common graphic features (illustrations, type size).
- 13.3 Make predictions about the content of a text using prior knowledge and text and graphic features.
- 13.4 Explain whether predictions about the content of a text were confirmed or disconfirmed and why.
- 13.5 Restate main ideas and important facts from a text heard or read.
- 24.1 Generate questions and gather information from several sources in a classroom, school, or public library.

Science and Technology/Engineering: Life Science

- 1 Recognize that animals (including humans) and plants are living things that grow, reproduce, and need food, air and water.
- 6 Recognize that people and other animals interact with their environment through their senses of sight, hearing, touch, smell and taste.
- 8 Identify the ways in which an organism's habitat provides for its basic needs (plants require air,

water, nutrients and light; animals require food, water, air and shelter).

Technology Literacy Standards and Expectations: Grades K - 2

- 3.1 Use various age-appropriate technologies to locate, collect, and organize information.

ALIGNMENT WITH AASL STANDARDS FOR THE 21ST CENTURY LEARNER

Standard 1: Inquire, think critically, and gain knowledge.

Skills:

- 1.1.1 Follow an inquiry-based process in seeking knowledge in curricular subject, and make the real-world connection for using this process in own life.
- 1.1.2 Use prior and background knowledge as context for new learning.
- 1.1.3 Develop and refine a range of questions to frame the search for new understanding.
- 1.1.4 Find, evaluate and select appropriate sources to answer questions.
- 1.1.7 Make sense of information gathered from diverse sources by identifying misconceptions, main and supporting ideas, conflicting information, and point of view or bias.

Dispositions in Action:

- 1.2.3 Demonstrate creativity by using multiple resources and formats.

Self-Assessment Strategies:

- 1.4.1 Monitor own information-seeking processes for effectiveness and progress, and adapt as necessary.
- 1.4.2 Use interaction with and feedback from teachers and peers to guide own inquiry process.
- 1.4.3 Monitor gathered information, and assess for gaps and weaknesses.

Standard 2: Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.

Skills:

- 2.1.3 Use strategies to draw conclusions from information and apply knowledge to curricular areas,

real-world situations, and further investigations.

- 2.1.6 Use the writing process, media and visual literacy, and technology skills to create products that express new understandings.

Self-Assessment Strategies:

- 2.4.3 Recognize new knowledge and understanding

Standard 3: Share knowledge and participate ethically and productively as members of our democratic society.

Self-Assessment Strategies:

- 3.4.1 Assess the processes by which learning was achieved in order to revise strategies and learn more effectively in the future.
- 3.4.2 Assess the quality and effectiveness of the learning product

Standard 4: Pursue personal and aesthetic growth.

Skills:

- 4.1.3 Respond to literature and creative expression of ideas in various formats and genres.
- 4.1.5 Connect ideas to own interests and previous knowledge and experience
- 4.1.8 Use creative and artistic formats to express personal learning.

Responsibilities:

- 4.3.1 Participate in the social exchange of ideas, both electronically and in person.

Integrated Learning Scenario

Grade 4: Oh Canada! An Inquiry Model

SCENARIO:

The Canadian Tourist Bureau is looking for new promotional materials. These materials should highlight how the climate, physical geography, and natural resources have influenced the settlement, trade and economy of the Provinces and Territories, promoting the reasons to visit Canada.

With a partner, students will plan and create a brochure or a radio or television ad for one of the Provinces or Territories of Canada to be used by the Canadian Tourist Bureau to attract tourists.

LIBRARY LESSON(S):

Students choose one of these Provinces or Territories:

- Alberta
- British Columbia
- Manitoba
- New Brunswick
- Newfoundland
- Northwest Territories
- Nova Scotia
- Nunavut
- Ontario
- Prince Edward Island
- Quebec
- Saskatchewan
- Yukon Territory

The promotional project should include information about the climate, physical geography and natural resources and explain how these have influenced the settlement, trade and economy of the province or territory.

ASSESSMENT:

Review the provided checklists for the brochure, radio ad, or television commercial to make sure you have included all the information required. If not all questions have been answered, resources should be used to fill in missing information.

Couch Potato Review: Students peer

review the ads, using a provided chart to take notes.

Reflection: Students write a journal article about which region of Canada they would like to visit, and why.

INSTRUCTIONAL STRATEGIES

Key Concepts

How do climate, physical geography, and natural resources affect the people of Canada?

- What is the climate? Look at: distance from large bodies of water, elevation, precipitation, and ranges in temperature
- What are the physical geographic landforms in the province/territory?
- What are the natural resources in your province/territory?
- How are the natural resources linked to the physical geography?
- What are the major cities?
- What languages are spoken?
- Which cultures are represented in this province/territory?
- What kinds of jobs do people have?
- How do people travel about the province/territory?
- How does climate affect the goods and services produced?

Students must gather information about their province or territory from a variety of sources, being sure to document where they found their information. They will use their information to create promotional material. Directions and templates are provided for creating a brochure, a radio ad, and a television commercial

INFORMATION LITERACY SKILLS PERFORMANCE INDICATORS

Standard 1: Define the information task.

Skills Indicator(s):

- 1.11 Understand the criteria for the research assignment.
- 1.12 Explain what the final product will look like.
- 1.13 Select a topic from a range of possibilities.
- 1.14 Use the teacher-provided essential question to develop a topic focus, or develop a self-selected essential question.
- 1.17 Read, listen, and watch from all relevant and appropriate sources to gain an overview of the topic.

Standard 2: Develop information-seeking strategies.

Skills Indicator(s):

- 2.15 Understand the library's organization of resources.
- 2.16 With assistance, select and modify keywords and phrases for information-seeking purposes.

Standard 3: Locate and access information.

Skills Indicator(s):

- 3.10 Independently choose appropriate information from print and electronic sources.

Standard 4: Use information.

Skills Indicator(s):

- 4.12 Independently take notes
- 4.13 Independently summarize and paraphrase information.
- 4.14 Choose appropriate order for information (chronological, alphabetical, and hierarchical in terms of importance, persuasive position).

Standard 5: Synthesize information.

Skills Indicator(s):

- 5.6 Present a final product using an appropriate format: report, poster, electronic program, web page or other medium of communication.

Standard 7: Evaluate.

- 7.7 Use critical and creative thinking skills to analyze, synthesize and evaluate relevance, reliability, and authority of sources.
- 7.8 Using predetermined criteria, evaluate the effectiveness of the communication of research results..
- 7.9 Review and evaluate the process of transforming information into knowledge.
- 7.10 Summarize new knowledge gained through peer presentations.

CONNECTION TO MASSACHUSETTS CURRICULUM FRAMEWORK STANDARDS**History and Social Studies**

- 4.17 On a map of North America, locate Canada, its provinces, and major cities (G).
- 4.18 Describe the climate, major physical characteristics, and major natural resources of Canada and explain their relationship to settlement, trade and the Canadian economy (G, E).

Technology Literacy Standards and Expectations: Grades 3 – 5**Standard 1: Database**

- 1.10 Do simple searches of existing databases, e.g., online library catalog, electronic encyclopedia).

Standard 1: Internet, Networking, and Online Communication

- 1.14 Explain and use age-appropriate online tools and resources, e.g., tutorial assessment, Web browser).
- 1.18 Use age-appropriate Internet-based search engines to locate and extract information.

Standard 3: Research

- 3.1 Locate, download, and organize content from digital media collections for specific purposes, citing sources.
- 3.2 Perform basic searches on databases, e.g., library card catalogue, encyclopedia) to locate information, using two or more key words and techniques to refine and limit such searches.

Standard 3: Communication

- 3.8 Create projects that use text and various forms of graphics, audio, and video (with proper citations) to communicate ideas.
- 3.9 Use teacher-developed guidelines to evaluate multimedia presentations for organization, content, design, presentation, and appropriate use of citations.

English Language Arts

- 13.9 Locate facts that answer the reader's questions
- 13.10 Distinguish cause from effect.
- 13.11 Distinguish fact from opinion.
- 13.12 Summarize main ideas and supporting details.
- 24.1 Generate questions and gather information from several sources in a classroom, school, or public library.
- 24.2 Identify and apply steps in conducting and reporting research.
 - Define the need for information and formulate open-ended research questions
 - Initiate a plan for searching for information
 - Locate resources
 - Interpret, use and communicate the information
 - Evaluate the research project as a whole
- 27.1 Create radio scripts, audiotapes, or videotapes for display or transmission.
- 27.2 Create presentations using computer technology.

ALIGNMENT WITH AASL STANDARDS FOR THE 21ST CENTURY LEARNER**Standard 1: Inquire, think critically, and gain knowledge.****Skills:**

- 1.1.3 Develop and refine a range of questions to frame the search for new understanding.
- 1.1.4 Find, evaluate and select appropriate sources to answer questions.
- 1.1.5 Evaluate information found in selected sources on the basis of accuracy, validity, appropriateness

for needs, importance, and social and cultural context.

- 1.1.6 Read, view and listen for information presented in any format, e.g., textual, visual, media, digital) in order to make inferences, and gather meaning
- 1.1.7 Make sense of information gathered from diverse sources by identifying misconceptions, main and supporting ideas, conflicting information, and point of view or bias.

Dispositions in Action:

- 1.2.2 Demonstrate confidence and self-direction by making independent choices in the selection of resources and information.
- 1.2.3 Demonstrate creativity by using multiple resources and formats.
- 1.2.4 Maintain a critical stance by questioning the validity and accuracy of all information.

Responsibilities:

- 1.3.1 Respect copyright/intellectual property rights of creators and producers.
- 1.3.3 Follow ethical and legal guidelines in gathering and using information.

Self-Assessment Strategies:

- 1.4.2 Use interaction with and feedback from teachers and peers to guide own inquiry process.

Standard 2: Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.**Skills:**

- 2.1.1 Continue an inquiry-based research process by applying critical-thinking skills (analysis, synthesis, evaluation, organization) to information and knowledge in order to construct new understandings, draw conclusions, and create new knowledge.
- 2.1.2 Organize knowledge so that it is useful.
- 2.1.4 Use technology and other information tools to analyze and organize information.
- 2.1.6 Use the writing process, media and visual literacy, and technology

skills to create products that express new understandings.

Dispositions in Action:

2.2.4 Demonstrate personal productivity by completing products to express learning.

Self-Assessment Strategies:

- 2.4.2 Reflect on systematic process, and assess for completeness of investigation.
- 2.4.3 Recognize new knowledge and understanding.
- 2.4.4 Develop directions for further investigations.

Standard 3: Share knowledge and participate ethically and productively as members of our democratic society.

Skills:

3.1.6 Use information and technology ethically and responsibly.

Self-Assessment Strategies:

3.4.1 Assess the processes by which learning was achieved in order to revise strategies and learn more effectively in the future.

Standard 4: Pursue personal and aesthetic growth.

Responsibilities:

4.3.4 Practice safe and ethical behaviors in personal electronic communication and interaction.

Integrated Learning Scenario

Grade 8: Conflict

SCENARIO:

This collaborative project is intended to bridge the students' study of literature relating to the Holocaust to contemporary conflicts, both far and near, and to examine how to resolve conflicts of many types.

LIBRARY LESSON(S):

Time Frame:

After the entire class reads classroom-assigned books and short stories about people who lived through and experienced the Holocaust, the class is broken into groups. Each group selects a novel about another ethnic or religious conflict from a librarian-generated list. These books are available in multiple copies in the library. Students write in a reading journal about this novel, in which they must both summarize what they have read, and relate it to their own thoughts and experiences beyond the text. This phase of the project takes four weeks.

Students then return to the library to research the conflict in the novel and present this information to their classmates. For this presentation, they pretend that they are one of the characters in the novel and make a presentation to the UN Commission on Human Rights, explaining the conflict and asking the UN to intervene. This phase of the project takes five to six days.

After hearing the presentations of their classmates over the course of three days, students fill out a guided listening sheet demonstrating that they have learned about the conflicts in the other books as well as their own.

Students complete the unit with a written response that synthesizes what they have learned about ethnic and religious conflicts and their possible solutions. They must also expand their understanding of conflict resolution by

examining conflicts closer to home: in their own country, state, community and school.

ASSESSMENT

Students are evaluated at many steps in the process. These include:

- Completeness of reading journal.
- Ability to work efficiently and effectively in a group.
- Research process.
- Final presentations that demonstrate understanding of the country's difficulties, as well as major plot and character elements.
- Thoughtful, well-written final essay about conflicts.
- Optional: Written proverb discussion

Extensions and Modifications

- In order to help students learn about the setting of their novels, students mark the location on a world map placed in the classroom. They do some basic research about their country, such as climate, primary businesses, major cities, and important geographic conditions. This information is also posted on the map near their country.
- After beginning the novels, students are given a list of proverbs. They choose a proverb that seems applicable to their novel and explain it in a short essay.
- About half-way through the reading process, students write a poem about the conflict from the point of view of one of the characters. This can be a written poem, a musical poem, or even a visual poem.

INSTRUCTIONAL STRATEGIES

Key Concepts

What universal human rights issues are presented in the various fiction pieces

read?

How can human rights violations be addressed?

Specific Skills

Students will be able to:

1. Draw connections between/ among different fictional works
2. Draw connections between fictional works and the real world
3. Locate their country on a map or globe
4. Create a persuasive piece (presentation)

INFORMATION LITERACY SKILLS PERFORMANCE INDICATORS

Standard 1: Define the information task

Skills Indicator(s):

- 1.11 Understand the criteria for the research assignment.
- 1.12 Explain what the final product will look like.
- 1.13 Select a topic from a range of possibilities.
- 1.14 Use the teacher-provided essential question to develop a topic focus, or develop a self-selected essential question.
- 1.15 With assistance, develop a thesis statement.
- 1.16 Identify pre-existing knowledge, as well as additional information necessary to solve the problem.
- 1.17 Read, listen, and watch all relevant and appropriate sources to gain an overview of the topic.

Standard 2: Develop information-seeking strategies

Skills Indicator(s):

- 2.16 With assistance, select and modify keywords and phrases for information-seeking purposes.

Standard 3: Locate and access information

Skills Indicator(s):

3.10 Independently choose information from print and electronic sources.

Standard 4: Use information

Skills Indicator(s):

- 4.12 Independently take notes.
- 4.13 Independently summarize and paraphrase information.
- 4.14 Choose appropriate order for information (chronological, alphabetical, hierarchical in terms of importance, persuasive position).
- 4.15 Make inferences from data.
- 4.16 Collaborate with others, including using technology to share information.

Standard 5: Synthesize information

Skills Indicator(s):

- 5.7 Use appropriate medium to produce an original product to communicate research results.
- 5.8 Collaborate with peers in sharing information.

Standard 6: Participate in collaborative activities

Skills Indicator(s):

- 6.14 Use provided guidelines and the group's work to improve content and delivery.

Standard 7: Evaluate

- 7.7 Use critical and creative thinking skills to analyze, synthesize and evaluate relevance, reliability, and authority of sources.
- 7.8 Using predetermined criteria, evaluate the effectiveness of the communication of research results.
- 7.9 Review and evaluate the process of transforming information into knowledge.
- 7.10 Summarize new knowledge gained through peer presentations.

CONNECTION TO MASSACHUSETTS CURRICULUM FRAMEWORK STANDARDS

English Language Arts

- 2.4 Integrate relevant information gathered from group discussions and interviews for reports.
- 3.10 Present an organized

interpretation of a literary work, film or dramatic production.

- 3.11 Use appropriate techniques for oral persuasion.
- 8.27 Identify evidence used to support an argument.
- 9.4 Relate a literary work to information about its setting.
- 9.5 Relate a literary work to artifacts, artistic creations, or historical sites of the period of its setting.
- 11.3 Apply knowledge of the concept that theme refers to the main idea and meaning of a selection, whether it is implied or stated.
- 11.4 Analyze and evaluate similar themes across a variety of selections, distinguishing theme from topic.
- 12.4 Locate and analyze elements of plot and characterization and then use an understanding of these elements to determine how qualities of the central characters influence the resolution of the conflict.
- 13.21 Recognize use of arguments for and against an issue.
- 13.22 Identify evidence used to support an argument.
- 13.23 Distinguish between the concepts of theme in a literary work and author's purpose in an expository text.
- 24.4 Apply steps for obtaining information from a variety of sources, organizing information, documenting sources, and presenting research in individual projects.

World History II

- 18 Summarize the major events and consequences of World War I:
- 5. The Armenian genocide in Turkey.
- 26 Describe the background, course, and consequences of the Holocaust, including its roots in the long tradition of Christian anti-Semitism, 19th century ideas about race and nation, and Nazi dehumanization of the Jews.
- 39 Explain the background for the establishment of the modern state of Israel in 1948, and the subsequent military and political conflicts between Israel and the Arab world.
- 43 Identify the sources of ethnic and religious conflicts in the following

nations and regions: Northern Ireland; the Balkans; Sudan and Rwanda; Sri Lanka; Kashmir.

- 44 Explain the reasons for the fall of apartheid in South Africa.
- 47 Explain the rise and funding of Islamic fundamentalism in the last half of the 20th century and identify the major events and forces in the Middle East over the last several decades.

Technology Literacy Standards and Expectations

Standard 3: Research

- 3.1 Explain and demonstrate effective searching and browsing strategies when working on projects.
- 3.2 Collect, organize, and analyze digital information from a variety of sources, with attribution.

ALIGNMENT WITH AASL STANDARDS FOR THE 21ST CENTURY LEARNER

Standard 1: Inquire, think critically, and gain knowledge.

Skills:

- 1.1.6 Read, view, and listen to information presented in any format (e.g., textual, visual, media, digital) in order to make inferences and gather meaning.
- 1.1.7 Make sense of information gathered from diverse sources by identifying misconceptions, main and supporting ideas, conflicting information, and point of view or bias.
- 1.1.8 Demonstrate mastery of technology tools for accessing information and pursuing inquiry.
- 1.1.9 Collaborate with others to broaden and deepen understanding.

Dispositions in Action:

- 1.2.4 Demonstrate confidence and self-direction by making independent choices in the selection of resources and information.
- 1.2.5 Demonstrate creativity by using multiple resources and formats.
- 1.2.4 Maintain a critical stance by questioning the validity and accuracy of all information.

Responsibilities:

- 1.3.1 Respect copyright/intellectual property rights of creators and producers.
- 1.3.3 Follow ethical and legal guidelines in gathering and using information.
- 1.3.4 Contribute to the exchange of ideas within the learning community.

Self-Assessment Strategies:

- 1.4.2 Use interaction with and feedback from teachers and peers to guide own inquiry process.
- 1.4.3 Monitor gathered information, and assess for gaps and weaknesses.

Standard 2: Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.**Skills:**

- 2.1.1 Continue an inquiry-based research process by applying critical-thinking skills (analysis, synthesis, evaluation, organization) to information and knowledge in order to construct new understandings, draw conclusions, and create new knowledge.
- 2.1.2 Organize knowledge so that it is useful.
- 2.1.3 Use strategies to draw conclusions from information and apply knowledge to curricular areas, real-world situations, and further investigations.
- 2.1.4 Use technology and other information tools to analyze and organize information.
- 2.1.6 Use the writing process, media and visual literacy, and technology skills to create products that express new understandings.

Dispositions in Action:

- 2.2.2 Use both divergent and convergent thinking to formulate alternative conclusions and test them against the evidence.
- 2.2.3 Employ a critical stance in drawing conclusions by demonstrating that the pattern of evidence leads to a decision or conclusion.
- 2.2.4 Demonstrate personal productivity by completing products to express learning.

Self-Assessment Strategies:

- 2.4.2 Reflect on systematic process, and assess for completeness of investigation.
- 2.4.3 Recognize new knowledge and understanding.
- 2.4.4 Develop directions for further investigations.

Standard 3: Share knowledge and participate ethically and productively as members of our democratic society.**Skills:**

- 3.1.6 Use information and technology ethically and responsibly.

Dispositions in Action:

- 3.2.2 Show social responsibility by participating actively with others in learning situations and by contributing questions and ideas during group discussions.

Responsibilities:

- 3.3.1 Solicit and respect diverse perspectives while searching for information, collaborating with others, and participating as a member of the community.

Self-Assessment Strategies:

- 3.4.1 Assess the processes by which learning was achieved in order to revise strategies and learn more effectively in the future.
- 3.4.2 Assess the quality and effectiveness of the learning product.
- 3.4.3 Assess own ability to work with others in a group setting by evaluating varied roles, leadership, and demonstrations of respect for other viewpoints.

Standard 4: Pursue personal and aesthetic growth.**Skills:**

- 4.1.7 Use social networks and information tools to gather and share information.

Dispositions in Action:

- 4.2.3 Maintain openness to new ideas by considering divergent opinions, changing opinions or conclusions when evidence supports the change, and seeking information about new ideas encountered through academic or personal experience.

Responsibilities:

- 4.3.4 Practice safe and ethical behaviors in personal electronic communication and interaction.

Integrated Learning Scenario

Grade 12: Issues in American Society

SCENARIO:

Students in the Contemporary American History class start work on their quarterly projects in the library. The project is a position paper on issues in the forefront of American society from the 1980-2001. The library teacher reviews use of the electronic catalog to find appropriate books, reviews the use of the databases, particularly the newspaper and periodical databases, available for research, and indicates the reference materials in the library that may be helpful. The library teacher also demonstrates the use of the Internet Public Library and its resources. The Library teacher reminds students of the criteria for evaluation of Internet resources found using search engines, and the pitfalls that can be encountered if web sites are not properly examined. URLs of relevant government resources, such as the Library of Congress, are provided.

LIBRARY LESSON(S):

Students have chosen topics during consultation with the history teacher, who has already discussed resource availability with the library teacher. In the first class visit to the library, the history teacher distributes a project rubric outlining the number and type of resources required, the minimum length of the final paper, and a reminder sheet of citation format. Students using computers available in the library initiate searches, perform an initial scan of results, and record promising results for future, more detailed exploration. In the second visit to the library, students use their records of promising resources for more detailed reading and initiate note-taking. The history teacher and library teacher circulate among the students, offering encouragement, visually assessing the progress of each student, and when necessary, offering advice on searching and recording practices. The class returns to the library for information searching until they have enough

information to draft their papers.

ASSESSMENT

Students submit their research papers for evaluation according to the pre-distributed rubric. The history teacher and library teacher evaluate the papers based on the rubric, which includes the number, variety, and authority of sources used.

INFORMATION LITERACY SKILLS PERFORMANCE INDICATORS

Standard 1: Define the information task

Skills Indicator(s):

- 1.18 Independently select a topic.
- 1.19 Develop an essential question to answer.
- 1.20 Skim/read all sources to provide background information and generate subsidiary questions.
- 1.21 Develop a thesis statement, demonstrating a particular point of view.

Standard 2: Develop information-seeking strategies

Skills Indicator(s):

- 2.18 Use a strategy for finding relevant information from a variety of sources, and be able to shift the strategy as necessary based on availability and relevance.
- 2.19 Assess the value of various types of electronic resources for data gathering, including databases, internet sites, ebooks, community and government electronic resources.
- 2.20 Independently develop keywords and phrases to search for information
- 2.21 Use information sources of all types to explore a topic.
- 2.22 Narrow or expand a topic based on preliminary searching.
- 2.23 Select primary and secondary sources as appropriate

Standard 3: Locate and access information

Skills Indicator(s):

- 3.13 Independently develop and implement an information search strategy.

Standard 4: Use information

Skills Indicator(s):

- 4.6 Practice independent critical thinking when reviewing a potential information source by: distinguishing between verifiable facts and opinion; detecting bias, identifying purpose, distinguishing between warranted and unwarranted claims and between relevant and irrelevant information, claims or reasons, recognizing inconsistencies or false claims.
- 4.17 Gather information to support a point of view in persuasive writing.
- 4.24 Demonstrate legal and ethical behaviors among peers, family and community regarding the use of technology and information.

Standard 5: Synthesize information

Skills Indicator(s):

- 5.11 Select an appropriate media format to communicate new understandings and new knowledge.
- 5.12 Create a storyboard, script, layout or rough draft of research notes.
- 5.13 Use appropriate editing, dictionary and thesaurus tools to produce a polished, original product that clearly communicates research results.

Standard 6: Participate in collaborative activities

Skills Indicator(s):

- 6.15 Integrate own knowledge and information with that of others in the group.

- 6.16 Actively listen to and respectfully respond to the point of view of others.
- 6.17 Collaborate with others to lead, facilitate, negotiate and otherwise participate in defining the information needs of a group.
- 6.18 Participate actively in group discussions to devise solutions to information problems that integrate group members' information and ideas.
- 6.19 Work to move the group to consensus after substantive conversations and sharing of information and ideas among all the members of the group.
- 6.20 Help organize and integrate the contributions of all the members of the group into information products.
- 6.22 Participate effectively as a member of a group in evaluating the content and delivery of its work and the effectiveness of the group's work habits

Standard 7: Evaluate

- 7.11 Voluntarily apply legal principles and ethical conduct related to information technology such as: copyright, plagiarism, privacy, online etiquette, acceptable use of resources.

CONNECTION TO MASSACHUSETTS CURRICULUM FRAMEWORK STANDARDS

English Language Arts: Composition Strand

- 24 Students will gather information from a variety of sources, analyze and evaluate the quality of the information they obtain, and use it to answer their own questions.
- 24.6 Formulate original, open-ended questions to explore a topic of interest, design and carry out research, and evaluate the quality of the research paper in terms of the adequacy of its questions, materials, approach, and documentation of sources.

Social Studies: History and Geography Concepts and Skills

- CS.5 Explain how a cause and effect relationship is different from a

- sequence or correlation of events.
- CS.7 Show connections, causal and otherwise, between particular historical events and ideas and larger social, economic, and political trends and developments.
- CS.9 Distinguish intended from unintended consequences.
- CS.10 Distinguish historical fact from opinion.

Social Studies: U.S. History II (Students would choose from topics below)

- USII.29 Analyze the presidency of Ronald Reagan.
- USII.30 Describe some of the major economic and social trends of the late 20th century.
- USII.31 Analyze the important domestic policies and events of the Clinton presidency.
- USII.32 Explain the importance of the 2000 presidential election.
- USII.33 Analyze the course and consequences of America's recent diplomatic initiatives.

Technology Literacy Standards and Expectations

Standard 1: Basic Operations

- 1.8 Apply advanced formatting and page layout features when appropriate, e.g., columns, templates and styles) to improve the appearance of documents and materials.

Standard 1: Internet, Networking, and Online Communication

- 1.27 Use search engines and online directories. Explain the differences among various search engines and how they rank results.

Standard 2: Ethics

- 2.5 Write correct in-text citations and reference lists for text and images gathered from electronic sources.

Standard 3: Research

- 3.1 Devise and demonstrate strategies for efficiently collecting and organizing information from electronic sources.
- 3.2 Compare, evaluate, and select appropriate electronic resources to locate specific information.
- 3.3 Select the most appropriate search engines and directories for specific research tasks.

- 3.4 Search for information within an electronic source, e.g., using the find command).

ALIGNMENT WITH AASL STANDARDS FOR THE 21ST CENTURY LEARNER

Standard 1: Inquire, think critically, and gain knowledge.

Skills:

- 1.1.1 Follow an inquiry-based process in seeking knowledge in curricular subjects, and make the real-world connection for using this process in own life.
- 1.1.2 Use prior and background knowledge as context for new learning.
- 1.1.3 Develop and refine a range of questions to frame the search for new understanding.
- 1.1.4 Find, evaluate and select appropriate sources to answer questions.
- 1.1.6 Read, view and listen for information presented in any format, e.g., textual, visual, media, digital) in order to make inferences, and gather meaning
- 1.1.7 Make sense of information gathered from diverse sources by identifying misconceptions, main and supporting ideas, conflicting information, and point of view or bias.
- 1.1.8 Demonstrate mastery of technology tools for accessing information and pursuing inquiry.
- 1.1.9 Collaborate with others to broaden and deepen understanding.

Dispositions in Action:

- 1.2.1 Display initiative and engagement by posing questions and investigating the answers beyond the collection of superficial facts.
- 1.2.2 Demonstrate confidence and self-direction by making independent choices in the selection of resources and information.
- 1.2.3 Demonstrate creativity by using multiple resources and formats.
- 1.2.4 Maintain a critical stance by questioning the validity and accuracy of all information.
- 1.2.5 Demonstrate adaptability by changing the inquiry focus,

questions, resources or strategies when necessary to achieve success.

- 1.2.6 Display emotional resilience by persisting in information searches despite challenges.
- 1.2.7 Display persistence by continuing to pursue information to gain a broad perspective.

Responsibilities:

- 1.3.1 Respect copyright/intellectual property rights of creators and producers.
- 1.3.2 Seek divergent perspectives during information gathering and assessment.
- 1.3.3 Follow ethical and legal guidelines in gathering and using information.
- 1.3.4 Contribute to the exchange of ideas within the learning community.

Self-Assessment Strategies:

- 1.4.1 Monitor own information-seeking processes for effectiveness and progress, and adapt as necessary.
- 1.4.2 Use interaction with and feedback from teachers and peers to guide own inquiry process.
- 1.4.3 Monitor gathered information, and assess for gaps and weaknesses.
- 1.4.4 Seek appropriate help when it is needed.

Standard 2: Draw conclusions, make informed decisions, apply knowledge to new situations, and create new knowledge.

Skills:

- 2.1.2 Organize knowledge so that it is useful.
- 2.1.5 Collaborate with others to exchange ideas, develop new understandings, make decisions, and solve problems.
- 2.1.6 Use the writing process, media and visual literacy, and technology skills to create products that express new understandings.

Dispositions in Action:

- 2.2.4 Demonstrate personal productivity by completing products to express learning.

Responsibilities:

- 2.3.2 Consider diverse and global perspectives in drawing conclusions.

Self-Assessment Strategies:

- 2.4.4 Develop directions for further investigations.

Standard 3: Share knowledge and participate ethically and productively as members of our democratic society.

Skills:

- 3.1.3 Use writing and speaking skills to communicate new understandings effectively.
- 3.1.4 Use technology and other information tools to organize and display knowledge and understanding in ways that others can view, use and assess.
- 3.1.6 Use information and technology ethically and responsibly.

Dispositions in Action:

- 3.2.1 Demonstrate leadership and confidence by presenting ideas to others in both formal and informal situations.
- 3.2.2 Show social responsibility by participating actively with others in learning situations and by contributing questions and ideas during group discussions.
- 3.2.3 Demonstrate teamwork by working productively with others.

Responsibilities:

- 3.3.2 Respect the differing interests and experience of others, and seek a variety of viewpoints.
- 3.3.7 Respect the principles of intellectual freedom

Standard 4: Pursue personal and aesthetic growth.

Responsibilities:

- 4.3.4 Practice safe and ethical behaviors in personal electronic communication and interaction.

Appendix II: Alignment of MSLA Information Literacy Skills with MA Technology and AASL Standards

MSLA Standard 1: Define an information task.

MSLA Pre-K – 2 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner ¹	
1.1	Ask a question that requires information seeking.			1.1.1	Follow an inquiry-based process in seeking knowledge in curricular subjects, and make the real-world connection for using this process in own life.
1.2	Rephrase the classroom assignment: What am I supposed to do?			1.1.3	Develop and refine a range of questions to frame the search for new understanding.
1.3	Identify existing knowledge and, with assistance, areas where more information is needed.			1.1.4	Find, evaluate and select appropriate sources to answer questions.
1.4	Brainstorm additional questions to answer in solving an information problem.			4.1.5	Connect ideas to own interests and previous knowledge and experience.
MSLA 3-4 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
1.5	With assistance, list the criteria for a research assignment.				
1.6	Demonstrate overall understanding of the final product, e.g. "I need to create a... multimedia presentation, poster, essay, etc."			2.1.6	Use the writing process, media and visual literacy, and technology skills to create products that express new understandings.
1.7	Use the teacher-selected essential question to develop a topic focus, e.g. "Why do leaves turn different colors in the fall?"	3.6	With teacher direction, use appropriate technology tools (e.g., graphic organizer) to define problems and propose hypotheses.	3.1.3	Use writing and speaking skills to communicate new understandings effectively.
1.8	Gather background information by reading, viewing or listening to a variety of the pre-selected and self-selected resources.	3.1	Use age-appropriate Internet-based search engines to locate and extract information, selecting appropriate key words.	1.1.1	Follow an inquiry-based process in seeking knowledge in curricular subjects, and make the real-world connection for using this process in own life.
1.9	As a class, develop a student-driven essential question.	3.7	Use spreadsheets and other applications to make predictions, solve problems, and draw conclusions.	1.1.3	Develop and refine a range of questions to frame the search for new understanding.
1.10	Identify existing knowledge as well as additional information necessary to solve the problem.	3.6	With teacher direction, use appropriate technology tools (e.g., graphic organizer) to define problems and propose hypotheses.	1.1.4	Find, evaluate and select appropriate sources to answer questions.
		3.1	Use age-appropriate Internet-based search engines to locate and extract information, selecting appropriate key words.	1.1.6	Read, review and listen for information presented in any format (e.g. textual, visual, media, digital) in order to make inferences, and gather meaning.
		3.7	Use spreadsheets and other applications to make predictions, solve problems, and draw conclusions.	1.1.9	Collaborate with others to broaden and deepen understanding.

¹ Excerpted from *Standards for the 21st-Century Learner* by the American Association of School Librarians, a division of the American Library Association, copyright © 2007 American Library Association. Available for download at www.ala.org/aasl/standards. Used with permission.

MSLA 5-8 Information Literacy Skills		MA Technology Literacy Standards and Expectations	AASL Standards for the 21st Century Learner
1.11	Understand the criteria for the research assignment.	1.10 Perform simple operations in a database (i.e., browse, sort, filter, search on selected criteria, delete data, enter data). 3.4 Independently use appropriate technology tools (e.g., graphic organizer) to define problems and propose hypotheses.	2.1.6 Use the writing process, media and visual literacy, and technology skills to create products that express new understandings.
1.12	Explain what the final product will look like.	1.16 Distinguish among different types of charts and graphs, and choose the most appropriate type to represent given data.	1.1.3 Develop and refine a range of questions to frame the search for new understanding.
1.13	Select a topic from a range of possibilities.	1.11 Plan and develop database reports to organize and display information.	2.1.1 Continue an inquiry-based research process by applying critical-thinking skills (analysis, synthesis, evaluation, organization) to information and knowledge in order to construct new understandings, draw conclusions, and create new knowledge.
1.14	Use the teacher-provided essential question to develop a topic focus, or develop a self-selected essential question.	1.18 Use Web browsing to access information (e.g., enter a URL, access links, create bookmarks/favorites, print Web pages).	1.1.4 Find, evaluate and select appropriate sources to answer questions.
1.15	With assistance, develop a thesis statement.	2.8 Analyze and explain how media and technology can be used to distort, exaggerate, and misrepresent information	1.1.5 Evaluate information found in selected sources on the basis of accuracy, validity, appropriateness for needs, importance, and social and cultural context.
1.16	Identify pre-existing knowledge, as well as additional information necessary to solve the problem.	3.1 Explain and demonstrate effective searching and browsing strategies when working on projects.	1.1.6 Read, review and listen for information presented in any format (e.g. textual, visual, media, digital) in order to make inferences, and gather meaning.
1.17	Read, listen, and watch from all relevant and appropriate sources to gain an overview of the topic.	3.9 Use a variety of telecommunication tools (e.g., e-mail, discussion groups, Web pages, blogs, Web conferences) to collaborate and communicate with peers, experts, and other audiences (at district's discretion).	1.2.3 Demonstrate creativity by using multiple resources and formats.
		3.2 Collect, organize, and analyze digital information from a variety of sources, with attribution	1.2.2 Demonstrate confidence and self-direction by making independent choices in the selection of resources and information.
		3.3 Use a variety of computing devices (e.g., probeware, handheld computers, digital cameras, scanners) to collect, analyze, and present information for curriculum assignments.	
		1.19 Identify probable types and locations of Web sites by examining their domain names, and explain that misleading domain names are sometimes created in order to deceive people (e.g., .edu, .com, .org, .gov, .au).	1.1.7 Make sense of information gathered from diverse sources by identifying misconceptions, main and supporting ideas, conflicting information, and point of view or bias.

MSLA 9-12 Information Literacy Skills		MA Technology Literacy Standards and Expectations	AASL Standards for the 21st Century Learner
1.18	Independently select a topic.		1.1.1 Follow an inquiry-based process in seeking knowledge in curricular subjects, and make the real-world connection for using this process in own life.
1.19	Develop an essential question to answer.		1.2.1 Display initiative and engagement by posing questions and investigating the answers beyond the collection of superficial facts.
1.20	Skim/read all sources to provide background information and generate subsidiary questions.		1.2.5 Demonstrate adaptability by changing the inquiry focus, questions, resources or strategies when necessary to achieve success.
1.21	Develop a thesis statement, demonstrating a particular point of view.		1.1.3 Develop and refine a range of questions to frame the search for new understanding. 1.1.6 Read, review and listen for information presented in any format (e.g. textual, visual, media, digital) in order to make inferences, and gather meaning. 1.2.6 Display emotional resilience by persisting in information searches despite challenges. 1.2.7 Display persistence by continuing to pursue information to gain a broad perspective. 2.1.1 Continue an inquiry-based research process by applying critical-thinking skills (analysis, synthesis, evaluation, organization) to information and knowledge in order to construct new understandings, draw conclusions, and create new knowledge. 2.1.3 Use strategies to draw conclusions from information and apply knowledge to curricular areas, real-world situations, and further investigations.

MSLA Standard 2: Develop information seeking strategies.

MSLA Pre-K – 2 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
2.1	Exhibit proper respect for and care of library materials, facilities, and equipment.	2.1	Follow classroom rules for the responsible use of computers, peripheral devices, and resources.		
2.2	Understand the layout and organization of the library.				
2.3	Understand and follow library rules and procedures.	2.3	Explain why there are rules for using technology at home and at school.		
2.4	Identify the parts of a book, e.g. spine, spine label, cover, title page, verso page, barcode if library is automated.			4.3.2	Recognize that resources are created for a variety of purposes.
2.5	Explain the difference between fiction and nonfiction.	2.4	Identify the purpose of a media message (to inform, persuade, or entertain).	1.1.4	Find, evaluate and select appropriate sources to answer questions.
2.6	Recognize which resources are the best to use and why.	2.5	Describe how people use many types of technologies in their daily lives.	1.2.2	Demonstrate confidence and self-direction by making independent choices in the selection of resources and information.
2.7	Web or map a topic based on prior knowledge and preliminary background information.			1.2.3	Demonstrate creativity by using multiple resources and formats.
2.8	Develop a strategy to solve an information problem e.g. (Big 6 TM).			2.1.3	Use strategies to draw conclusions from information and apply knowledge to curricular areas, real-world situations, and further investigations.
				1.1.2	Use prior and background knowledge as context for new learning.
				1.1.7	Make sense of information gathered from diverse sources by identifying misconceptions, main and supporting ideas, conflicting information, and point of view or bias.
				1.1.1	Follow an inquiry-based process in seeking knowledge in curricular subjects, and make the real-world connection for using this process in own life.
				1.4.1	Monitor own information-seeking processes effectiveness and progress, and adapt as necessary.
				1.4.2	Use interaction with and feedback from teachers and peers to guide own inquiry process.
				1.4.3	Monitor gathered information, and assess for gaps and weaknesses.
				1.4.4	Seek appropriate help when it is needed.

MSLA 3-4 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
2.9	Identify and use parts of a book to gather information: copyright, publisher, title page, table of contents, glossary, etc.	1.18	Use age-appropriate Internet-based search engines to locate and extract information, selecting appropriate key words.	1.1.4	Find, evaluate and select appropriate sources to answer questions.
2.10	Explain that there are different types of resources that can be used for different purposes: books, databases, periodicals, pre-selected class websites, reference materials, such as dictionaries, encyclopedias, thesauruses, almanacs, etc.	3.3	Evaluate Internet resources in terms of their usefulness for research.	1.1.5	Evaluate information found in selected sources on the basis of accuracy, validity, appropriateness for needs, importance, and social and cultural context.
2.11	Identify key words that needed to find information on a topic.	3.1	Explain and demonstrate effective searching and browsing strategies when working on projects.	1.2.2	Demonstrate confidence and self-direction by making independent choices in the selection of resources and information.
2.12	With assistance, use the online catalog to find information sources in the school library.	1.10	Do simple searches of existing databases (e.g., online library catalog, electronic encyclopedia).	1.2.3	Demonstrate creativity by using multiple resources and formats.
2.13	Web, map or diagram a main topic with sub-topics.	3.6	With teacher direction, use appropriate technology tools (e.g., graphic organizer) to define problems and propose hypotheses.	1.1.8	Demonstrate mastery of technology tools for accessing information and pursuing inquiry.
2.14	Develop a strategy for finding relevant information including a variety of types of resources.	3.2	Perform basic searches on databases (e.g., library card catalogue, encyclopedia) to locate information, using two or more key words and techniques to refine and limit such searches.	1.2.5	Demonstrate adaptability by changing the inquiry focus, questions, resources or strategies when necessary to achieve success.
				1.2.6	Display emotional resilience by persisting in information searches despite challenges.
				1.2.7	Display persistence by continuing to pursue information to gain a broad perspective.
				1.1.7	Make sense of information gathered from diverse sources by identifying misconceptions, main and supporting ideas, conflicting information, and point of view or bias.
				1.1.1	Follow an inquiry-based process in seeking knowledge in curricular subjects, and make the real-world connection for using this process in own life.
				1.1.2	Use prior and background knowledge as context for new learning.
				1.4.2	Use interaction with and feedback from teachers and peers to guide own inquiry process.
				1.4.3	Monitor gathered information, and assess for gaps and weaknesses.
				1.4.4	Seek appropriate help when it is needed.

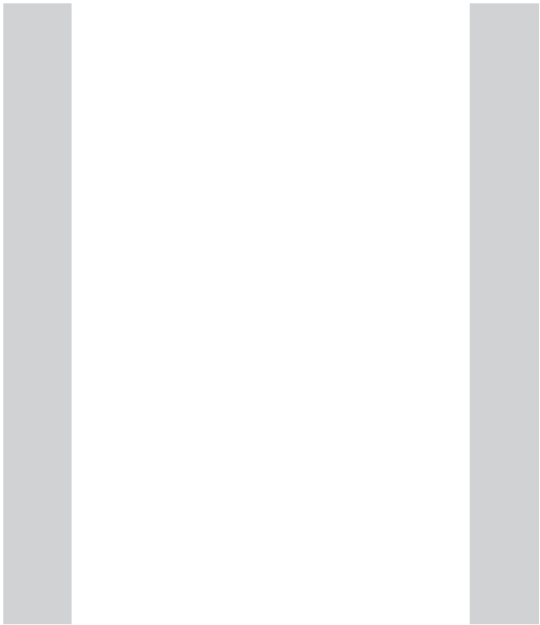
MSLA 5-8 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
2.15	Understand the library's organization of resources.	2.5	Identify and discuss the technology proficiencies needed in the workplace, as well as ways to prepare to meet these demands.	1.1.4	Find, evaluate and select appropriate sources to answer questions.
		2.6	Identify and describe the effect technological changes have had on society.		
		1.10	Perform simple operations in a database (i.e., browse, sort, filter, search on selected criteria, delete data, enter data).		
		1.11	Plan and develop database reports to organize and display information.		
2.16	With assistance, select and modify keywords and phrases for information-seeking purposes.	1.18	Use Web browsing to access information (e.g., enter a URL, access links, create bookmarks/favorites, print Web pages). Explain and demonstrate effective searching and browsing strategies when working on projects.	1.1.6	Read, review and listen for information presented in any format (e.g. textual, visual, media, digital) in order to make inferences, and gather meaning.
2.17	Understand the difference between, and the uses of, primary and secondary sources.	2.7	Explain how technology can support communication and collaboration, personal and professional productivity, and lifelong learning.	1.1.7	Make sense of information gathered from diverse sources by identifying misconceptions, main and supporting ideas, conflicting information, and point of view or bias.
		3.2	Collect, organize, and analyze digital information from a variety of sources, with attribution.	1.2.2	Demonstrate confidence and self-direction by making independent choices in the selection of resources and information.
				1.2.3	Demonstrate creativity by using multiple resources and formats.
				1.2.5	Demonstrate adaptability by changing the inquiry focus, questions, resources or strategies when necessary to achieve success.
				1.2.6	Display emotional resilience by persisting in information searches despite challenges.
				1.2.7	Display persistence by continuing to pursue information to gain a broad perspective.
				1.4.1	Monitor own information-seeking processes effectiveness and progress, and adapt as necessary.
				2.2.1	Demonstrate flexibility in the use of resources by adapting information strategies to each specific resource and by seeking additional resources when clear conclusions cannot be drawn.
				1.2.4	Maintain a critical stance by questioning the validity and accuracy of all information.
				1.1.8	Demonstrate mastery of technology tools for accessing information and pursuing inquiry.

MSLA 9-12 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
2.18	Use a strategy for finding relevant information from a variety of sources, shifting the strategy as necessary based on availability and relevance.	1.28	Explain and demonstrate effective search strategies for locating and retrieving electronic information (e.g., using syntax and Boolean logic operators).	1.1.4	Find, evaluate and select appropriate sources to answer questions.
2.19	Assess the value of various types of electronic resources for data gathering, including databases, internet sites, ebooks, community and government resources.	3.1	Devise and demonstrate strategies for efficiently collecting and organizing information from electronic sources.	1.1.6	Read, review and listen for information presented in any format (e.g. textual, visual, media, digital) in order to make inferences, and gather meaning.
2.20	Independently develop keywords and phrases to search for information.	3.2	Compare, evaluate, and select appropriate electronic resources to locate specific information.	1.1.7	Make sense of information gathered from diverse sources by identifying misconceptions, main and supporting ideas, conflicting information, and point of view or bias.
2.21	Use information sources of all types to explore a topic.	3.3	Select the most appropriate search engines and directories for specific research tasks.	1.2.2	Demonstrate confidence and self-direction by making independent choices in the selection of resources and information.
2.22	Narrow or expand a topic based on preliminary searching.			1.2.3	Demonstrate creativity by using multiple resources and formats.
2.23	Select primary and secondary sources as appropriate.			1.2.5	Demonstrate adaptability by changing the inquiry focus, questions, resources or strategies when necessary to achieve success.
				1.2.6	Display emotional resilience by persisting in information searches despite challenges.
				1.2.7	Display persistence by continuing to pursue information to gain a broad perspective.
				1.4.1	Monitor own information-seeking processes effectiveness and progress, and adapt as necessary.
				2.2.1	Demonstrate flexibility in the use of resources by adapting information strategies to each specific resource and by seeking additional resources when clear conclusions cannot be drawn.
				1.2.4	Maintain a critical stance by questioning the validity and accuracy of all information.
				1.1.8	Demonstrate mastery of technology tools for accessing information and pursuing inquiry.
				1.3.2	Seek divergent perspectives during information gathering and assessment.

MSLA Standard 3: Locate and access information

MSLA Pre-K – 2 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
3.1	Independently locate the library staff and navigate the library’s physical space.			1.4.2	Use interaction with and feedback from teachers and peers to guide own inquiry process.
3.2	Independently approach the library teacher for assistance.				
3.3	Understand that there is a relationship between spine label and book content and independently locate fiction and non-fiction sections in the school library.	3.1	Use various age-appropriate technologies to locate, collect, and organize information.		
MSLA 3-4 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
3.4	Understand the roles of the library teacher and library staff.	1.1	Demonstrate basic steps in using available hardware and applications (e.g., log into a computer, connect/disconnect peripherals, upload files from peripherals).	1.4.2	Use interaction with and feedback from teachers and peers to guide own inquiry process.
		1.2	Select a printer, use print preview, and print a document with the appropriate page setup and orientation.		
3.5	Understand the organization of the library media center	1.8	Define the term “database” and provide examples from everyday life (e.g., library catalogues, school records, telephone directories).	1.1.4	Find, evaluate and select appropriate sources to answer questions.
3.6	Use library catalog to locate information sources.	1.10	Do simple searches of existing databases (e.g., online library catalog, electronic encyclopedia).		
3.7	With assistance, choose appropriate information source.	3.2	Perform basic searches on databases (e.g., library card catalogue, encyclopedia) to locate information, using two or more key words and techniques to refine and limit such searches.		
3.8	With assistance, find information from maps and charts.	3.2	Perform basic searches on databases (e.g., library card catalogue, encyclopedia) to locate information, using two or more key words and techniques to refine and limit such searches.		
3.9	Explore and develop understanding of how to gather information, including use of table of contents, index, glossary.	3.1	Locate, download, and organize content from digital media collections for specific purposes, citing sources.		

MSLA 5-8 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
3.10	Independently choose information from print and electronic sources.	1.18	Use Web browsing to access information (e.g., enter a URL, access links, create bookmarks/favorites, print Web pages).	1.1.4	Find, evaluate and select appropriate sources to answer questions.
3.11	Use cross-references to locate additional information.	3.2	Collect, organize, and analyze digital information from a variety of sources, with attribution.	1.2.2	Demonstrate confidence and self-direction by making independent choices in the selection of resources and information.
3.12	Recognize inadequacies or gaps in information.	1.25	Use a variety of technology tools (e.g., dictionary, thesaurus, grammar-checker, calculator) to maximize the accuracy of work.	1.2.7	Display persistence by continuing to pursue information to gain a broad perspective.
3.12	Recognize inadequacies or gaps in information.	3.5	Use and modify databases and spreadsheets to analyze data and propose solutions.	1.4.3	Monitor gathered information, and assess for gaps and weaknesses.
		3.6	Develop and use guidelines to evaluate the content, organization, design, use of citations, and presentation of technologically enhanced projects.		
MSLA 9-12 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
3.13	Independently develop and implement an information search strategy.	1.28	Explain and demonstrate effective search strategies for locating and retrieving electronic information (e.g., using syntax and Boolean logic operators).	1.1.1	Follow an inquiry-based process in seeking knowledge in curricular subjects, and make the real-world connection for using this process in own life.
		3.1	Devise and demonstrate strategies for efficiently collecting and organizing information from electronic sources.	1.1.2	Use prior and background knowledge as context for new learning.
		3.2	Compare, evaluate, and select appropriate electronic resources to locate specific information.	1.1.3	Develop and refine a range of questions to frame the search for new understanding.
3.14	Select the best sources for the information need.	3.3	Select the most appropriate search engines and directories for specific research tasks.	1.1.4	Find, evaluate and select appropriate sources to answer questions.
				1.1.5	Evaluate information found in selected sources on the basis of accuracy, validity, appropriateness for needs, importance, and social and cultural context.
				1.2.1	Display initiative and engagement by posing questions and investigating the answers beyond the collection of superficial facts.
				1.2.2	Demonstrate confidence and self-direction by making independent choices in the selection of resources and information.
				1.2.3	Demonstrate creativity by using multiple resources and formats.
				1.2.5	Demonstrate adaptability by changing the inquiry focus, questions, resources or strategies when necessary to achieve success.

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- 1.2.6 Display emotional resilience by persisting in information searches despite challenges.
 - 1.2.7 Display persistence by continuing to pursue information to gain a broad perspective.
 - 1.3.2 Seek divergent perspectives during information gathering and assessment.
 - 1.4.1 Monitor own information-seeking processes effectiveness and progress, and adapt as necessary.
 - 1.4.2 Use interaction with and feedback from teachers and peers to guide own inquiry process.
 - 1.4.3 Monitor gathered information, and assess for gaps and weaknesses.
 - 1.4.4 Seek appropriate help when it is needed.

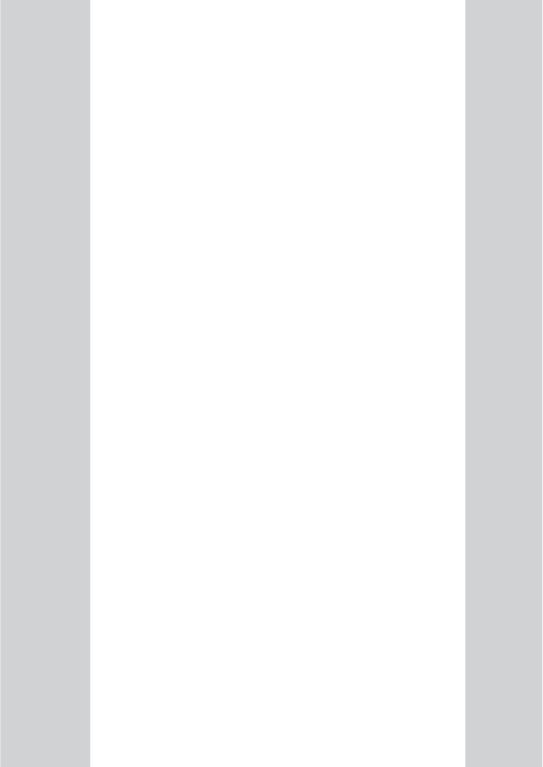
MSLA Standard 4a: Use information – evaluation for appropriateness

MSLA Pre-K – 2 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
4.1	Distinguish fiction from nonfiction.	3.2	Review teacher-selected Internet resources and explain why each resource is or is not useful.	1.1.4	Find, evaluate and select appropriate sources to answer question.
				1.1.5	Evaluate information found in selected sources on the basis of accuracy, validity, appropriateness for needs, importance, and social and cultural context.
MSLA 3-4 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
4.2	With assistance, develop criteria for relevant information, including authority, accuracy, objectivity, relevancy, and currency of source.	2.4	Identify ways in which technology is used in the workplace and in society.	1.1.4	Find, evaluate and select appropriate sources to answer questions.
		2.6	Analyze media messages and determine if their purpose is to inform, persuade, or entertain.		
		2.7	Explain that some Web sites and search engines may include sponsored commercial links.		
4.3	Compare and contrast information from different sources.	3.1	Locate, download, and organize content from digital media collections for specific purposes, citing sources.	1.1.5	Evaluate information found in selected sources on the basis of accuracy, validity, appropriateness for needs, importance, and social and cultural context.
		3.3	Evaluate Internet resources in terms of their usefulness for research.	1.2.4	Maintain a critical stance by questioning the validity and accuracy of all information.
				1.2.2	Demonstrate confidence and self-direction by making independent choices in the selection of resources and information.
				1.3.2	Seek divergent perspectives during information gathering and assessment.
MSLA 5-8 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
4.4	Independently develop criteria for relevant information, including authority, accuracy, objectivity, relevancy, and currency of source.	1.19	Identify probable types and locations of Web sites by examining their domain names, and explain that misleading domain names are sometimes created in order to deceive people (e.g., .edu, .com, .org, .gov, .au).	1.1.4	Find, evaluate and select appropriate sources to answer questions

4.5	Independently discriminate between primary and secondary sources.	<p>3.2 Collect, organize, and analyze digital information from a variety of sources, with attribution.</p> <p>3.9 Use a variety of telecommunication tools (e.g., e-mail, discussion groups, Web pages, blogs, Web conferences) to collaborate and communicate with peers, experts, and other audiences (at district’s discretion).</p>	<p>1.1.5 Evaluate information found in selected sources on the basis of accuracy, validity, appropriateness for needs, importance, and social and cultural context.</p> <p>1.2.3 Demonstrate creativity by using multiple resources and formats.</p> <p>1.2.4 Maintain a critical stance by questioning the validity and accuracy of all information.</p> <p>1.3.2 Seek divergent perspectives during information gathering and assessment.</p>
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MSLA 9-12 Information Literacy Skills	MA Literacy Standards and Expectations	AASL Standards for the 21st Century Learner
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4.6	Practice independent critical thinking when reviewing a potential information source by: distinguishing between verifiable facts and opinions; detecting bias, identifying the purpose, distinguishing between relevant and irrelevant information, claims or reasons; recognizing logical inconsistencies or false claims.	<p>1.27 Use search engines and online directories. Explain the differences among various search engines and how they rank results.</p> <p>2.9 Evaluate the authenticity, accuracy, appropriateness, and bias of electronic resources, including Web sites.</p> <p>2.10 Analyze the values and points of view that are presented in media messages</p> <p>3.2 Compare, evaluate, and select appropriate electronic resources to locate specific information.</p>	<p>1.1.4 Find, evaluate and select appropriate sources to answer questions.</p> <p>1.1.5 Evaluate information found in selected sources on the basis of accuracy, validity, appropriateness for needs, importance, and social and cultural context.</p> <p>1.1.7 Make sense of information gathered from diverse sources by identifying misconceptions, main and supporting ideas, conflicting information, and point of view or bias.</p> <p>1.2.4 Maintain a critical stance by questioning the validity and accuracy of all information.</p> <p>1.4.3 Monitor gathered information, and assess for gaps and weaknesses.</p>
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- 2.1.1 Continue an inquiry-based research process by applying critical-thinking skills (analysis, synthesis, evaluation, organization) to information and knowledge in order to construct new understandings, draw conclusions, and create new knowledge.
 - 2.1.4 Use technology and other information tools to analyze and organize information.
 - 2.3.2 Consider diverse and global perspectives in drawing conclusions.
 - 2.3.3 Use valid information and reasoned conclusions to make ethical decisions.
 - 2.4.1 Determine how to act on information (accept, reject, modify).
 - 3.3.1 Solicit and respect diverse perspectives while searching for information, collaborating with others, and participating as a member of the community.
 - 3.1.6 Use information and technology ethically and responsibly.

MSLA Standard 4b: Use information – extraction of most relevant information

MSLA Pre-K – 2 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
4.7	Sort, classify and sequence pieces of information e.g. place events along a timeline, sort families of animals, etc.	3.3	Use age-appropriate technologies (e.g., a simple graphing application) to gather and analyze data.	2.1.1	Continue an inquiry-based research process by applying critical-thinking skills (analysis, synthesis, evaluation, organization) to information and knowledge in order to construct new understandings, draw conclusions, and create new knowledge
		3.4	Use a variety of age-appropriate technologies (e.g., drawing program, presentation software) to communicate and exchange ideas.	2.1.2	Organize knowledge so that it is useful.
				2.1.4	Use technology and other information tools to analyze and organize information.
MSLA 3-4 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
4.8	Take notes using guided research forms to extract relevant information.			2.1.2	Organize knowledge so that it is useful.
4.9	Use provided graphic organizers and outlines to organize information logically.	1.11	Demonstrate an understanding of the spreadsheet as a tool to record, organize, and graph information.		
4.10	With assistance, choose appropriate order for information e.g. chronological, alphabetical, topical, etc.			2.1.4	Use technology and other information tools to analyze and organize information.
4.11	With assistance, summarize and paraphrase information in own words	1.20	Create a series of slides and organize them to present research or convey an idea.	2.2.4	Demonstrate personal productivity by completing products to express learning.
		1.22	Use painting and drawing applications to create and edit work.	2.1.6	Use the writing process, media and visual literacy, and technology skills to create products that express new understandings.
MSLA 5-8 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL	
4.12	Independently take notes.	1.12	Describe the use of spreadsheets to calculate, graph, organize, and present data in a variety of real-world settings.	2.1.2	Organize knowledge so that it is useful.
		3.3	Use a variety of computing devices (e.g., probeware, handheld computers, digital cameras, scanners) to collect, analyze, and present information for curriculum assignments.		
4.13	Independently summarize and paraphrase information.			2.1.4	Use technology and other information tools to analyze and organize information.

4.14	Choose appropriate order for information e.g. chronological, alphabetical, hierarchical in terms of importance, persuasive position.	3.7	Plan, design, and develop a multimedia product to present research findings and creative ideas effectively, citing sources.	2.1.6	Use the writing process, media and visual literacy, and technology skills to create products that express new understandings.
4.15	Make inferences from data.	1.12	Describe the use of spreadsheets to calculate, graph, organize, and present data in a variety of real-world settings.	2.1.3	Use strategies to draw conclusions from information and apply knowledge to curricular areas, real-world situations, and further investigations.
4.16	Collaborate with others, including using technology to share information.	2.13	Explain terms associated with the safe, effective, and efficient use of telecommunications and Internet (e.g., password, firewalls, spam, security, Acceptable Use Policy).	2.2.2	Use both divergent and convergent thinking to formulate alternative conclusions and test them against the evidence.
		3.9	Use a variety of telecommunication tools (e.g., e-mail, discussion groups, Web pages, blogs, Web conferences) to collaborate and communicate with peers, experts, and other audiences (at district's discretion).	2.2.3	Employ a critical stance in drawing conclusions by demonstrating that the pattern of evidence leads to a decision or conclusion.
				1.3.4	Contribute to the exchange of ideas within the learning community.
				3.1.2	Participate and collaborate as members of a social and intellectual network of learners.
				3.2.2	Show social responsibility by participating actively with others in learning situations and by contributing questions and ideas during group discussions.
				3.3.1	Solicit and respect diverse perspectives while searching for information, collaborating with others, and participating as a member of the community.
				3.2.3	Demonstrate teamwork by working productively with others.
				3.4.3	Assess own ability to work with others in a group setting by evaluating varied roles, leadership, and demonstrations of respect for other viewpoints.
2.4	Describe appropriate and responsible use of communication tools (e.g., chats, instant messaging, blogs, and wikis).			4.1.7	Use social networks and information tools to gather and share information.
				4.2.3	Maintain openness to new ideas by considering divergent opinions, changing opinions or conclusions when evidence supports the change, and seeking information about new ideas encountered through academic or personal experience.

MSLA 9-12 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
4.17	Gather information to support a point of view in persuasive writing.	1.33	Use a variety of applications to plan, create, and edit multimedia products (e.g. slide presentations, videos, animations, simulations, podcasts).	2.1.6	Use the writing process, media and visual literacy, and technology skills to create products that express new understandings.
				2.3.2	Consider diverse and global perspectives in drawing conclusions.
				3.1.3	Use writing and speaking skills to communicate new understandings effectively.
				3.3.2	Respect the differing interests and experience of others, and seek a variety of viewpoints.

MSLA Standard 4c: Use information – ethical behavior in information use.

MSLA Pre-K – 2 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
4.18	Indicate the source of information.	2.2	Explain the importance of giving credit to media creators when using their work in student projects.	3.1.6	Use information and technology ethically and responsibly.
MSLA 3-4 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
4.19	Define plagiarism.	2.2	Explain responsible uses of technology and digital information; describe possible consequences of inappropriate use.	1.3.1	Respect copyright/intellectual property rights of creators and producers.
		2.3	Explain Fair Use Guidelines for the use of copyrighted materials (e.g., text, images, music, video) in student projects.		
4.20	Using a provided format, create correct citations for text and images.	3.1	Locate, download, and organize content from digital media collections for specific purposes, citing sources.	1.3.3	Follow ethical and legal guidelines in gathering and using information.
4.21	Adhere to the provisions of the school's Acceptable Use Policy.	2.1	Explain and demonstrate compliance with school rules (Acceptable Use Policy) regarding responsible use of computers and networks.	1.3.5	Use information technology responsibly.
MSLA 5-8 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
4.22	Independently create correct citations for text and images used.	2.1	Explain ethical issues related to privacy, plagiarism, spam, viruses, hacking, and file sharing.	1.3.1	Respect copyright/intellectual property rights of creators and producers.
		2.3	Explain fair use guidelines for using copyrighted materials (e.g., images, music, video, text) in school projects.		
4.23	With assistance begin to demonstrate understanding of copyright law, e.g. fair use and intellectual property rights.	2.2	Explain how copyright law protects the ownership of intellectual property, and explain possible consequences of violating the law.	1.3.3	Follow ethical and legal guidelines in gathering and using information.
MSLA 9-12 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL	
4.24	Demonstrate legal and ethical behaviors among peers, family and community regarding the use of technology and information.	2.3	Explain laws restricting the use of copyrighted materials.	1.3.1	Respect copyright/intellectual property rights of creators and producers.
4.25	Demonstrate understanding of copyright law.	2.1	Demonstrate compliance with the school's Acceptable Use Policy.	1.3.3	Follow ethical and legal guidelines in gathering and using information.
		2.4	Identify examples of plagiarism, and discuss the possible consequences of plagiarizing the work of others.		
		2.5	Write correct in-text citations and reference lists for text and images gathered from electronic sources.		

2.2 . Explain issues related to the responsible use of technology (e.g., privacy, security).

2.6 Give examples of the appropriate and responsible use of communication tools (e.g., chats, instant messaging, blogs, wikis).

2.7 Discuss misuse of technology for personal and commercial reasons (e.g., software piracy, unauthorized file sharing/downloading, virus spreading, and hacking); explain possible consequences.

1.3.4 Contribute to the exchange of ideas within the learning community.

1.3.5 Use information technology responsibly.

3.3.1 Solicit and respect diverse perspectives while searching for information, collaborating with others, and participating as a member of the community.

3.3.3 Use knowledge and information skills dispositions to engage in public conversation and debate around issues of common concern.

4.3.4 Practice safe and ethical behaviors in personal electronic communication and interaction.

MSLA Standard 5: Synthesize information

MSLA Pre-K – 2 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
5.1	Create and share developmentally appropriate text and images with others.			2.1.6	Use the writing process, media and visual literacy, and technology skills to create products that express new understandings.
5.2	Use new information in the final product.			4.1.3	Respond to literature and creative expression of ideas in various formats and genres.
5.3	With assistance present a final product using an appropriate format: report, poster, electronic program, or other medium.	3.4	Use a variety of age-appropriate technologies (e.g., drawing program, presentation software) to communicate and exchange ideas.	4.1.8	Use creative and artistic formats to express personal learning.
				4.3.1	Participate in the social exchange of ideas, both electronically and in person.
MSLA 3-4 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
5.4	With assistance, consider the purpose and audience for the product and/or presentation.	2.5	Work collaboratively online with other students under teacher supervision.	2.1.2	Organize knowledge so that it is useful.
5.5	Organize the information in a way which is appropriate for the assignment, project or question.	2.6	Analyze media messages and determine if their purpose is to inform, persuade, or entertain.	2.1.6	Use the writing process, media and visual literacy, and technology skills to create products that express new understandings.
5.6	Present a final product using an appropriate format: report, poster, electronic program, or other medium of communication.	1.19	Create, edit, and format text on a slide.	2.2.4	Demonstrate personal productivity by completing products to express learning.
		1.20	Create a series of slides and organize them to present research or convey an idea.	3.1.3	Use writing and speaking skills to communicate new understandings effectively.
		3.5	Use online tools (e.g., e-mail, online discussion forums, blogs, and wikis) to gather and share information collaboratively with other students, if the district allows it.	3.3.5	Contribute to the exchange of ideas within and beyond the learning community.
				2.1.4	Use technology and other information tools to analyze and organize information.
				2.4.1	Determine how to act on information (accept, reject, modify).
				3.1.1	Conclude an inquiry-based research by sharing new understandings and reflecting on the learning.

MSLA 5-8 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
5.7	Use appropriate medium to produce an original product to communicate research results.	2.7	Explain how technology can support communication and collaboration, personal and professional productivity, and lifelong learning.	2.1.2	Organize knowledge so that it is useful.
5.8	Collaborate with peers in sharing information.	3.9	Use a variety of telecommunication tools (e.g., e-mail, discussion groups, Web pages, blogs, Web conferences) to collaborate and communicate with peers, experts, and other audiences (at district's discretion).	2.1.4	Use technology and other information tools to analyze and organize information.
5.9	Understand that communicating information is a life long skill.	3.7	Plan, design, and develop a multimedia product to present research findings and creative ideas effectively, citing sources.	2.1.6	Use the writing process, media and visual literacy, and technology skills to create products that express new understandings.
				2.2.4	Demonstrate personal productivity by completing products to express learning.
				3.1.3	Use writing and speaking skills to communicate new understandings effectively.
				3.1.4	Use technology and other information tools to organize and display knowledge and understanding in ways that others can view, use and assess.
				3.4.2	Assess the quality and effectiveness of the learning product.
				1.1.9	Collaborate with others to broaden and deepen understanding.
				1.3.2	Seek divergent perspectives during information gathering and assessment.
				1.3.4	Contribute to the exchange of ideas within the learning community.
				2.1.5	Collaborate with others to exchange ideas, develop new understandings, make decisions, and solve problems.
				3.1.2	Participate and collaborate as members of a social and intellectual network of learners.
				3.2.2	Show social responsibility by participating actively with others in learning situations and by contributing questions and ideas during group discussions.
				3.2.3	Demonstrate teamwork by working productively with others.

			<p>3.3.1 Solicit and respect diverse perspectives while searching for information, collaborating with others, and participating as a member of the community.</p> <p>3.3.2 Respect the differing interests and experience of others, and seek a variety of viewpoints.</p> <p>3.3.5 Contribute to the exchange of ideas within and beyond the learning community.</p> <p>3.4.3 Assess own ability to work with others in a group setting by evaluating varied roles, leadership, and demonstrations of respect for other viewpoints.</p> <p>1.4.1 Monitor own information-seeking processes effectiveness and progress, and adapt as necessary.</p> <p>2.1.3 Use strategies to draw conclusions from information and apply knowledge to curricular areas, real-world situations, and further investigations.</p> <p>2.2.3 Employ a critical stance in drawing conclusions by demonstrating that the pattern of evidence leads to a decision or conclusion.</p> <p>2.2.4 Demonstrate personal productivity by completing products to express learning.</p> <p>3.2.1 Demonstrate leadership and confidence by presenting ideas to others in both formal and informal situations.</p>
MSLA 9-12 Information Literacy Skills		MA Technology Literacy Standards and Expectations	AASL Standards for the 21st Century Learner
5.10	Consider the purpose and audience for the product and/or presentation.	3.5 Explain and demonstrate how specialized technology tools can be used for problem solving, decision making, and creativity in all subject areas (e.g., simulation software, environmental probes, computer-aided design, geographic information systems, dynamic geometric software, graphing calculators, art and music composition software).	2.1.6 Use the writing process, media and visual literacy, and technology skills to create products that express new understandings.
5.11	Select an appropriate media format to communicate new understandings and new knowledge.	3.6 Use a variety of media to present information for specific purposes (e.g., reports, research papers, presentations, newsletters, Web sites, podcasts, blogs), citing sources.	2.2.4 Demonstrate personal productivity by completing products to express learning.
5.12	Create a storyboard, script, layout or rough draft of research notes.	3.8 Use online communication tools to collaborate with peers, community members, and field experts as appropriate (e.g., bulletin boards, discussion forums, listservs, Web conferencing).	3.1.3 Use writing and speaking skills to communicate new understandings effectively.

5.13 Use appropriate, editing, dictionary and thesaurus tools to produce a polished, original product that clearly communicates research results.

3.9 Plan and implement a collaborative project with students in other classrooms and schools using telecommunications tools (e.g., e-mail, discussion forums, groupware, interactive Web sites, videoconferencing).

3.1.4 Use technology and other information tools to organize and display knowledge and understanding in ways that others can view, use and assess.

3.2.1 Demonstrate leadership and confidence by presenting ideas to others in both formal and informal situations.

2.1.2 Organize knowledge so that it is useful.

2.4.1 Determine how to act on information (accept, reject, modify).

MSLA Standard 6: Participate in collaborative activities

MSLA Pre-K – 2 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
6.1	Demonstrate appropriate group conduct (take turns speaking, respect opinions, use library voice)	3.4	Use a variety of age-appropriate technologies (e.g., drawing program, presentation software) to communicate and exchange ideas.	3.2.2	Show social responsibility by participating actively with others in learning situations and by contributing questions and ideas during group discussions.
6.2	Listen to the information and ideas of others.			3.2.3	Demonstrate teamwork by working productively with others.
6.3	Cooperate with others and share resources.			4.2.3	Maintain openness to new ideas by considering divergent opinions, changing opinions or conclusions when evidence supports the change, and seeking information about new ideas encountered through academic or personal experience.
6.4	Work with other students to create and evaluate simple information products.	3.3	Use age-appropriate technologies (e.g., a simple graphing application) to gather and analyze data.	2.1.5	Collaborate with others to exchange ideas, develop new understandings, make decisions, and solve problems.
6.5	Assist other students with book selection.			3.1.2	Participate and collaborate as members of a social and intellectual network of learners.
				3.2.1	Demonstrate leadership and confidence by presenting ideas to others in both formal and informal situations.
MSLA 3-4 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
6.6	Exhibit an understanding of the rights of other library users.	2.5	Work collaboratively online with other students under teacher supervision.		
6.7	Work cooperatively with others and share resources and materials.	3.10	Communicate with other students and other classes using appropriate technology, including e-mail if the district allows it.	2.1.5	Collaborate with others to exchange ideas, develop new understandings, make decisions, and solve problems.
6.8	Discuss information and ideas with others, listen well and reformulate own ideas when appropriate.	3.5	Use online tools (e.g., e-mail, online discussion forums, blogs, and wikis) to gather and share information collaboratively with other students, if the district allows it.	1.3.2	Seek divergent perspectives during information gathering and assessment within the learning community.
6.9	Use information sources, select information and ideas that will contribute directly to the success of group projects.	3.5	Use online tools (e.g., e-mail, online discussion forums, blogs, and wikis) to gather and share information collaboratively with other students, if the district allows it.	1.4.2	Use interaction with and feedback from teachers and peers to guide own inquiry process.
6.10	Respect others' ideas and backgrounds and acknowledge their contributions.	3.2	Collect, organize, and analyze digital information from a variety of sources, with attribution.		
6.11	Encourage consideration of ideas and information from all group members.	3.2	Collect, organize, and analyze digital information from a variety of sources, with attribution.	2.3.2	Consider diverse and global perspectives in drawing conclusions.

6.12	Participate actively in group discussions to analyze information products and solutions.		
6.13	Collaborate with others to design, develop and evaluate information products and suggest solutions.	3.10	Communicate with other students and other classes using appropriate technology, including e- mail if the district allows it.
			3.1.2 Participate and collaborate as members of a social and intellectual network of learners.
			3.2.2 Show social responsibility by participating actively with others in learning situations and by contributing questions and ideas during group discussions.
			3.3.1 Solicit and respect diverse perspectives while searching for information, collaborating with others, and participating as a member of the community.
			3.3.2 Respect the differing interests and experience of others, and seek a variety of viewpoints.
			2.4.3 Recognize new knowledge and understanding.
			1.1.4 Find, evaluate and select appropriate sources to answer questions.
			1.1.5 Evaluate information found in selected sources on the basis of accuracy, validity, appropriateness for needs, importance, and social and cultural context.
			1.1.9 Collaborate with others to broaden and deepen understanding.
			2.1.2 Organize knowledge so that it is useful
			3.3.5 Contribute to the exchange of ideas within and beyond the learning community.
			3.2.3 Demonstrate teamwork by working productively with others.
			3.3.7 Respect the principles of intellectual freedom
			1.4.2 Use interaction with and feedback from teachers and peers to guide own inquiry process.

MSLA 5-8 Information Literacy Skills	MA Technology Literacy Standards and Expectations	AASL Standards for the 21st Century Learner
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6.14	Use provided guidelines and the group's work to improve content and delivery.	3.8	Identify differences between various media and explain issues associated with repurposing information from one medium to another (e.g., from print to the Web).	1.4.2	Use interaction with and feedback from teachers and peers to guide own inquiry process.
				2.4.2	Reflect on systematic process, and assess for completeness of investigation.
				2.4.4	Develop directions for further investigations.

MSLA 9-12 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
				3.4.1	Assess the processes by which learning was achieved in order to revise strategies and learn more effectively in the future.
				3.4.3	Assess own ability to work with others in a group setting by evaluating varied roles, leadership, and demonstrations of respect for other viewpoints.
6.15	Integrate their own knowledge and information with that of others in the group.	3.9	Plan and implement a collaborative project with students in other classrooms and schools using telecommunications tools (e.g., e-mail, discussion forums, groupware, interactive Web sites, videoconferencing).	1.3.4	Contribute to the exchange of ideas within the learning community.
6.16	Actively listen to and respectfully respond to the point of view of others.	3.8	Use online communication tools to collaborate with peers, community members, and field experts as appropriate (e.g., bulletin boards, discussion forums, listservs, Web conferencing).	1.4.2	Use interaction with and feedback from teachers and peers to guide own inquiry process.
6.17	Collaborate with others to lead, facilitate, negotiate and otherwise participate in defining the information needs of a group.	3.7	Demonstrate how the use of various techniques and effects (e.g., editing, music, color, rhetorical devices) can be used to convey meaning in media.	2.1.5	Collaborate with others to exchange ideas, develop new understandings, make decisions, and solve problems.
6.18	Participate actively in group discussions to devise solutions to information problems that integrate group members' information and ideas.	3.5	Explain and demonstrate how specialized technology tools can be used for problem solving, decision making, and creativity in all subject areas (e.g., simulation software, environmental probes, computer-aided design, geographic information systems, dynamic geometric software, graphing calculators, art and music composition software).	3.1.2	Participate and collaborate as members of a social and intellectual network of learners.
6.19	Work to move the group to consensus after substantive conversations and sharing of information and ideas among all the members of the group.			3.2.1	Demonstrate leadership and confidence by presenting ideas to others in both formal and informal situations.
6.20	Help organize and integrate the contributions of all the members of the group into information products.			3.2.2	Show social responsibility by participating actively with others in learning situations and by contributing questions and ideas during group discussions.
6.21	Work with others to create and evaluate complex information products that integrate information in a variety of formats.			3.2.3	Demonstrate teamwork by working productively with others.
6.22	Participate effectively as a member of a group in evaluating the content and delivery of its work and the effectiveness of the group's work habits.			1.1.7	Make sense of information gathered from diverse sources by identifying misconceptions, main and supporting ideas, conflicting information, and point of view or bias.
				1.1.9	Collaborate with others to broaden and deepen understanding.

- 1.2.1 Display initiative and engagement by posing questions and investigating the answers beyond the collection of superficial facts.
- 2.3.2 Consider diverse and global perspectives in drawing conclusions.
- 3.3.7 Respect the principles of intellectual freedom.
- 1.1.1 Follow an inquiry-based process in seeking knowledge in curricular subjects, and make the real-world connection for using this process in own life.
- 1.1.2 Use prior and background knowledge as context for new learning.
- 1.3.2 Seek divergent perspectives during information gathering and assessment.
- 2.4.4 Develop directions for further investigations.
- 2.1.2 Organize knowledge so that it is useful.
- 3.1.1 Conclude an inquiry-based research by sharing new understandings and reflecting on the learning.
- 3.1.3 Use writing and speaking skills to communicate new understandings effectively
- 3.1.4 Use technology and other information tools to organize and display knowledge and understanding in ways that others can view, use and assess.
- 1.4.1 Monitor own information-seeking processes effectiveness and progress, and adapt as necessary.
- 2.4.2 Reflect on systematic process, and assess for completeness of investigation.
- 3.4.1 Assess the processes by which learning was achieved in order to revise strategies and learn more effectively in the future.
- 3.4.2 Assess the quality and effectiveness of the learning product.
- 3.4.3 Assess own ability to work with others in a group setting by evaluating varied roles, leadership, and demonstrations of respect for other viewpoints

MSLA Standard 7: Evaluate

MSLA Pre-K – 2 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
7.1	Use a provided checklist or rubric to determine that project is complete and accurate.			2.4.2	Reflect on systematic process, and assess for completeness of investigation.
7.2	Judge the process by asking questions: e.g. What did I like? What was easy? What was difficult? How can I do it better next time?			3.4.2	Assess the quality and effectiveness of the learning product.
7.3	Judge the product by asking questions: e.g. Did I complete all the steps required by my teacher? What have I learned? How can I improve my final product? If I had to do it over again, what would I do differently?			1.4.1	Monitor own information-seeking processes effectiveness and progress, and adapt as necessary.
				1.4.2	Use interaction with and feedback from teachers and peers to guide own inquiry process.
				3.4.1	Assess the processes by which learning was achieved in order to revise strategies and learn more effectively in the future.
				1.4.3	Monitor gathered information, and assess for gaps and weaknesses.
				2.4.3	Recognize new knowledge and understanding.
				2.2.4	Demonstrate personal productivity by completing products to express learning.
MSLA 3-4 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
7.4	Conference with peers, teachers, and library teacher during the creation of the product and in final product evaluation.	3.5	Use online tools (e.g., e-mail, online discussion forums, blogs, and wikis) to gather and share information collaboratively with other students, if the district allows it.	1.1.9	Collaborate with others to broaden and deepen understanding.
		3.10	Communicate with other students and other classes using appropriate technology, including e- mail if the district allows it.	1.3.4	Contribute to the exchange of ideas within the learning community.
				1.4.2	Use interaction with and feedback from teachers and peers to guide own inquiry process.
				1.4.4	Seek appropriate help when it is needed.
				2.1.5	Collaborate with others to exchange ideas, develop new understandings, make decisions, and solve problems.

MSLA 5-8 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
				3.3.1	Solicit and respect diverse perspectives while searching for information, collaborating with others, and participating as a member of the community.
7.5	Analyze the evaluation results to improve their communications through developing evaluation criteria and doing self and peer evaluation.	3.6	Develop and use guidelines to evaluate the content, organization, design, use of citations, and presentation of technologically enhanced projects.	1.1.2	Use prior and background knowledge as context for new learning.
7.6	With assistance, describe the ethical use of information.	2.1	Explain ethical issues related to privacy, plagiarism, spam, viruses, hacking, and file sharing.	1.4.1	Monitor own information-seeking processes effectiveness and progress, and adapt as necessary.
		3.2	Collect, organize, and analyze digital information from a variety of sources, with attribution.		
7.7	Use critical and creative thinking skills to analyze, synthesize and evaluate relevance, reliability, and authority of sources.	1.19	Identify probable types and locations of Web sites by examining their domain names, and explain that misleading domain names are sometimes created in order to deceive people (e.g., .edu, .com, .org, .gov, .au).	1.4.2	Use interaction with and feedback from teachers and peers to guide own inquiry process.
7.8	Using predetermined criteria, evaluate the effectiveness of the communication of research results.	2.3	Explain fair use guidelines for using copyrighted materials (e.g., images, music, video, text) in school projects.	2.4.4	Develop directions for further investigations.
7.9	Review and evaluate the process of transforming information into knowledge.	2.4	Describe appropriate and responsible use of communication tools (e.g., chats, instant messaging, blogs, and wikis).	3.4.1	Assess the processes by which learning was achieved in order to revise strategies and learn more effectively in the future.
7.10	Summarize new knowledge gained through peer presentations.	2.8	Analyze and explain how media and technology can be used to distort, exaggerate, and misrepresent information.	1.3.1	Respect copyright/intellectual property rights of creators and producers.
				1.3.3	Follow ethical and legal guidelines in gathering and using information.
				3.1.6	Use information and technology ethically and responsibly.
				4.3.4	Practice safe and ethical behaviors in personal electronic communication and interaction. Find, evaluate and select appropriate sources to answer questions.
				1.1.5	Evaluate information found in selected sources on the basis of accuracy, validity, appropriateness for needs, importance, and social and cultural context.
				1.2.4	Maintain a critical stance by questioning the validity and accuracy of all information.

				2.1.1	Continue an inquiry-based research process by applying critical-thinking skills (analysis, synthesis, evaluation, organization) to information and knowledge in order to construct new understandings, draw conclusions, and create new knowledge.
				2.4.2	Reflect on systematic process, and assess for completeness of investigation.
				3.4.2	Assess the quality and effectiveness of the learning product.
				1.4.3	Monitor gathered information, and assess for gaps and weaknesses.
				2.4.3	Recognize new knowledge and understanding.
				2.2.4	Demonstrate personal productivity by completing products to express learning.
MSLA 9-12 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
7.11	Voluntarily apply legal principles and ethical conduct related to information technology such as: copyright, plagiarism, privacy, online etiquette, acceptable use of resources.	2.1	Demonstrate compliance with the school's Acceptable Use Policy.	1.3.1	Respect copyright/intellectual property rights of creators and producers.
		2.2	Explain issues related to the responsible use of technology (e.g., privacy, security).	1.3.3	Follow ethical and legal guidelines in gathering and using information.
		2.3	Explain laws restricting the use of copyrighted materials.	1.3.5	Use information technology responsibly.
		2.4	Identify examples of plagiarism, and discuss the possible consequences of plagiarizing the work of others.	3.1.6	Use information and technology ethically and responsibly.
		2.5	Write correct in-text citations and reference lists for text and images gathered from electronic sources	4.3.4	Practice safe and ethical behaviors in personal electronic communication and interaction
		2.6	Give examples of the appropriate and responsible use of communication tools (e.g., chats, instant messaging, blogs, wikis).		
		2.7	Discuss misuse of technology for personal and commercial reasons (e.g., software piracy, unauthorized file sharing/downloading, virus spreading, and hacking); explain possible consequences.		

MSLA Standard 8: Appreciate literature

MSLA Pre-K –2 Information Literacy Skills		MA Technology Literacy Standards and Expectations	AASL Standards for the 21st Century Learner
8.1	Understand the importance of the library as an information source.		1.1.6 Read, review and listen for information presented in any format (e.g. textual, visual, media, digital) in order to make inferences, and gather meaning.
8.2	Demonstrate active listening skills.		4.1.1 Read, view and listen for pleasure and personal growth.
8.3	Listen to literature for pleasure and information.		4.2.4 Show an appreciation for literature by electing to read for pleasure and expressing and interest in various literary genres.
8.4	Use illustrations to acquire a greater understanding of the story.		1.1.7 Make sense of information gathered from diverse sources by identifying misconceptions, main and supporting ideas, conflicting information, and point of view or bias.
8.5	Use the library collection for pleasure reading.		1.1.9 Collaborate with others to broaden and deepen understanding.
8.6	Understand the difference between an author and an illustrator.		4.1.7 Use social networks and information tools to gather and share information.
8.7	Demonstrate comprehension of a story heard, read or viewed through verbal discussion and/or written responses or artwork.		4.3.1 Participate in the social exchange of ideas, both electronically and in person.
8.8	Share books by favorite authors and illustrators.		
8.9	Identify books that are special award winners e.g. Caldecott, Newbury and Coretta Scott King Awards.		
MSLA 3-4 Information Literacy Skills		MA Technology Literacy Standards and Expectations	AASL Standards for the 21st Century Learner
8.10	Recognize various genres of literature.		4.1.3 Respond to literature and creative expression of ideas in various formats and genres.
8.11	Demonstrate awareness of literature from various cultures and genres e.g., fairy tales, folklore, myths and legends, poetry.		4.1.2 Read widely and fluently to make connections, with self, the world, and previous reading.
8.12	Make connections among materials read, heard, or viewed.		
8.13	Make predictions in literature.		
8.14	Recognize basic story elements: character, setting, and conflict.		

MSLA 5-8 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
8.15	Incorporate critical and creative thinking skills to evaluate literary elements and conventions.				
8.16	Display knowledge of various types of print and electronic material, of genres, and of selection aids.	1.18	Use Web browsing to access information (e.g., enter a URL, access links, create bookmarks/favorites, print Web pages).		
8.17	Identify and read from a variety of genres e.g. historical, realistic, fantasy, fiction, folklore, poetry, biography, nonfiction.				
8.18	Recognize reading as a lifelong pursuit.				
8.19	Recognize characteristic styles of various authors and illustrators.				
MSLA 9-12 Information Literacy Skills		MA Technology Literacy Standards and Expectations		AASL Standards for the 21st Century Learner	
8.20	Identify award-winning books, their selection criteria, and attributes.				
8.22	Perform preliminary research to enhance appreciation of literature.	1.28	Explain and demonstrate effective search strategies for locating and retrieving electronic information (e.g., using syntax and Boolean logic operators).		
8.23	Demonstrate an understanding of the characteristics of the different literary genres, including: fantasy, folklore, poetry, drama, biography, short stories, science fiction, historical fiction, realistic fiction, humor, etc.				