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Massachusetts  
Recommended PreK – 12  
Information Fluency  
Standards

**DRAFT**

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## Introduction

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.

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

The essential purpose of education is to create life-long learners. Educators help students sort through a vast amount of information, organize it, synthesize it, and create "meaningful patterns" from it, so that they can not only pass today's tests, but they can also find and learn what they need to know years from now. School library programs can, and should be, primary supporters of this educational process, poised as they are on the cutting edge of the technological and informational boom. School library teachers are one of the chief agents of support for students, working in partnership with classroom teachers, school administrators, parents, and other community members.

Helping children and young adults grasp, comprehend, and interpret information and transform it into personal knowledge has been the special task and achievement of school library teachers (Thomas 2004). The Massachusetts Recommended PreK – 12 Information Fluency Standards were created to ensure that today's students have all the tools they need to become effective and ethical consumers and users of the flood of data, in all formats, that has become a necessary part of contemporary life.

To meet the requirements of the Massachusetts Curriculum Frameworks Standards, students must be skillful information problem solvers and accomplished researchers. Information fluency is an integral part of every framework; teaching students how to think critically and creatively about ideas and information is a shared responsibility. The following guide is designed to follow the *Big Six Information Literacy Model* developed by Michael Eisenberg and Bob Berkowitz (2006). The *Big Six* is known as a

metacognitive scaffold, or an information problem solving strategy. Additional steps have been added to the *Big Six* as determined by the committee to be essential to the research process. The guidelines outlined on the following pages are to be used by both classroom teachers and library teachers in the teaching of information fluency skills within the parameters of collaborative lessons and projects. They are designed to support and augment the Guiding Principles, General Standards, and Strands of the Massachusetts Curriculum Frameworks.

The creators of this document elected to use the terminology *Information Fluency* in lieu of the more commonly known term, *Information Literacy*. According to Daniel Callison (2003), "*Information fluency* is the ability to analyze information needs and to move confidently among media, information, and computer literacy skills resulting in the effective application of a strategy or strategies that will best meet those needs." We believe that the use of the phrase *Information Fluency* better describes the vision and mission of school library teachers and school libraries of the future.

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## Executive Summary

The Massachusetts Recommended PreK – 12 Information Fluency Standards have been developed to support and advance the Massachusetts Common Core of Learning, adopted in July of 1994, a reform effort put in motion by the Massachusetts Education reform Act of 1993 (DOE). This document was created and developed by library teachers in PreK through grade 12 school districts and independent schools working with staff from the Department of Education. Its purpose is to provide guidelines to schools on what students should be able to do in order to use information efficiently, effectively, and ethically. School districts can use these recommended standards to ensure that their students are comfortable and proficient with information in all formats.

These recommended standards have been designed to complement other Massachusetts Curriculum Frameworks, including the *Massachusetts English Language Arts (ELA) Curriculum Framework*, *Massachusetts History and Social Science Curriculum Frameworks*, *Massachusetts Science and Technology/Engineering Framework*, and additional recommended standards such as the *Massachusetts Recommended PreK – 12 Instructional Technology Standards*, *The Partnership for 21<sup>st</sup> Century Skills*' document entitled "Framework for 21<sup>st</sup> Century Learning", and AASL's *Information Power: Building Partnerships for Learning* (AASL and AECT, 1998).

The Massachusetts Curriculum Frameworks explicitly make the connection between successful mastery of framework content and school libraries. The ELA Curriculum Framework clearly states in *General Standard 24: Research*: "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". The word *library* appears 22 times in the ELA Framework, and the word *libraries* appears five times. Other frameworks follow suit. The ELA framework states: "Library teachers can work with classroom teachers in selecting instructional materials to support literature study through a variety of approaches" (ELA Frameworks, 2001). Clearly, the connection is

there. Classroom teachers and library teachers, working together, enhance the delivery of curriculum in our schools today.

The *Massachusetts Recommended PreK – 12 Instructional Technology Standards* complement and, in some instances, overlap the standards contained in this document. For example, Standard 2.3 from the *Recommended Instructional Technology Standards* indicates that students “Explore practices for evaluating web sites”. This is replicated in the Information fluency Standard 4.5. There are numerous such examples, reinforcing the complementary nature of both documents.

*The Partnership for 21<sup>st</sup> Century Skills’* document entitled “Framework for 21<sup>st</sup> Century Learning” (2004) reminds us of the importance of the acquisition of information fluency skills. The partnership’s goals are 1) to “build consensus among the education, business and policymaking communities on the importance of 21<sup>st</sup> century skills and to develop a common language for describing these skills;” 2) to create a successful model of learning 21<sup>st</sup> century skills (including information and communication skills, thinking and problem-solving skills, and interpersonal and self-directional skills) in core subjects using information and communication technology; 3) to provide schools with ways to measure their progress in defining, teaching, and assessing twenty-first century skills; and 4) to identify priorities and strategies for improvement supported by this public-private partnership.

AASL’s *Information Power: Building Partnerships for Learning* (AASL and AECT, 1998) defines students that are “independent learners” as those students that apply “the principles of information literacy to access, evaluate, and use information about issues and situations of personal interest” (AASL and AECT, 1998, p. 23). Information literacy is “the keystone of lifelong learning and at the heart of the school library media program” (p. 1). Certified library teachers are leaders in their schools in the support of lifelong learning by combining instructional strategies and activities with information fluency skills curricula and individualized learning pursuits.

Today's school libraries are extending their services to provide information access 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 twenty-first century.

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## Overview of Grade Spans

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The information fluency skills are divided into four age spans:

- Kindergarten 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 fluency skills. First, regardless of the grade, it is important to remember that students learn information fluency skills best when introduced at the point of need, not in isolation. Jamie McKenzie says 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 in 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 support 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 fluency 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 computer 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 eighth grade. 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 the information fluency 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.

### **Kindergarten to grade 2**

There are some adults who do not understand the importance of beginning information fluency skills for this age group, as many of the students in this grade span are not readers at all, while many others are only at the beginning stages of the “learning to read” level. The groundwork for later skills must be laid, however, even at this young age. Students in the lower elementary grades must 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 things 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 basics elements of stories.

### **Grades 3-4**

The students at this grade level are making the critical transition from “learning to read” to “reading to learn”. Information fluency skills at this level correspond to their greater reading abilities, and their greater capacity for critical thinking skills. They should be practicing making connections of all sorts, within literature, as well as with words. For example, they should be able to begin to develop a search strategy for information by recognizing that there are different sorts of information beyond fiction and non-fiction books, and that keywords can help them find information that they need, either in a library catalog, or in the index of a book. Once they find the information that they need, students should also be able to organize it in a meaningful way, such as with webs and graphic organizers. These are some of the skills that will prepare them for the next stage of information fluency.

### **Grades 5-8**

By fifth grade, most students are competent readers and are now reading to learn. They are also beginning to be able to think abstractly, and should be taught information fluency skills that build on and develop this ability. By the end of eighth grade they should be familiar with various internet search tools and how to use them, and they should begin to be able to evaluate information that they find. In addition, they should also be much better at evaluating their own research process and product, and should be able to explain the ethical use of information. If provided with authentic learning opportunities on a regular basis in a resource-based environment, eighth-graders should be extremely fluent in most of the information skills.

## **Grades 9-12**

The information fluency skills delineated for this age group further develop the skills from earlier ages, but are more in depth, and focus more on student independence. As they prepare to go off to college and/or the world of work, students should have become competent critical thinkers, and independent information users. They must have learned how to ask relevant sub-questions in order to answer a broader question, and they must 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 should have learned how to develop a search strategy, and be able to change the strategy if it isn't working. They need to be able to understand both the possibilities and the limitations of various internet-based resources. They should have learned how to use information ethically, and be able to work both individually and collaboratively.

## **Conclusion**

The ultimate goal of a school library program is to help students find, evaluate, use, and present information efficiently, effectively and ethically. The goal of these information fluency standards is to help school districts focus on age-appropriate skills that will lead to students becoming life-long readers and learners who contribute positively to society.

**The Recommended PreK – 12 Information fluency Standards fall under eight broad categories:**

**Standard 1. Define Information Task**

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

**Standard 2. Develop 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 Fluency Standards

## 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	<p>By the end of second grade, students will be able to:</p> <ul style="list-style-type: none"> <li>1.1 Rephrase the classroom assignment: What am I supposed to do?</li> <li>1.2 Identify existing knowledge and, with assistance, list 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.</li> <li>1.3 Brainstorm additional questions to answer in solving an information problem.</li> </ul>
3-4	<p>By the end of fourth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <ul style="list-style-type: none"> <li>1.4 With assistance, list the criteria for a research assignment.</li> <li>1.5 Demonstrate overall understanding of the final product, e.g. "I need to create a... (multimedia presentation, diorama, poster, essay, etc.)"</li> <li>1.6 Use the teacher-selected essential question to develop a topic focus, e.g. "Why do leaves turn different colors in the fall?"</li> <li>1.7 Gather background information by reading, viewing or listening to a variety of pre-selected and self-selected resources.</li> <li>1.8 As a class, develop student-driven essential question.</li> <li>1.9 As a class, develop subsidiary questions to answer in solving an information problem.</li> <li>1.10 Identify existing knowledge as well as additional information necessary to solve the problem.</li> </ul>

Grade Level	Performance Indicator
5-8	<p>By the end of the eighth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <ul style="list-style-type: none"> <li>1.11 Understand the criteria for the research assignment.</li> <li>1.12 Explain what the final product will look like.</li> <li>1.13 Select a topic from a range of possibilities.</li> <li>1.14 Use the teacher-provided essential question to develop a topic focus, or develop a self-selected essential question.</li> <li>1.15 With assistance, develop a thesis statement (grade 8).</li> <li>1.16 Develop subsidiary questions to help address the essential question.</li> <li>1.17 Identify pre-existing knowledge, as well as additional information necessary to solve the problem.</li> <li>1.18 Skim and read from print and electronic general reference sources to gain an overview of the topic.</li> </ul>
9-12	<p>By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <ul style="list-style-type: none"> <li>1.19 Select a topic.</li> <li>1.20 Demonstrate understanding of the final product.</li> <li>1.21 Develop an essential question to answer.</li> <li>1.22 Skim/read reference sources to provide background information and generate subsidiary questions.</li> <li>1.23 Develop a thesis statement, demonstrating a particular point of view.</li> </ul>

**Standard 2. Develop Information Seeking Strategies.**

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

<b>Grade Level</b>	<b>Performance Indicator</b>
PreK-2	<p>By the end of second grade, students should be able to:</p> <ul style="list-style-type: none"><li>2.1 Identify the parts of a book, e.g. spine, spine label, cover, title page, verso page, barcode (if automated library).</li><li>2.2 Explain the difference between fiction and non-fiction.</li><li>2.3 Recognize which resources are the best to use and why.</li><li>2.4 Web or map a topic based on prior knowledge and preliminary background information.</li><li>2.5 Develop a strategy to solve an information problem: PLAN–DO-REVIEW (based on Big6™)</li></ul>
3-4	<p>By the end of fourth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <ul style="list-style-type: none"><li>2.6 Identify and use parts of a book to gather information : copyright, publisher, title page, table of contents, glossary, etc.</li><li>2.7 Explain that there are different types of resources that can be used for different purposes: books, databases, children’s periodicals, pre-selected class websites, reference materials such as dictionaries, encyclopedias, thesauruses, almanacs, etc.</li><li>2.8 Explain the differences and uses of basic reference materials as sources of information: dictionary, encyclopedia, atlas, almanacs, thesaurus.</li><li>2.9 Identify key words that will enable information on a topic to be located.</li><li>2.10 Use the online catalog with assistance, to find information sources in the school library.</li><li>2.11 Web, map, or diagram a main topic with sub-topics.</li><li>2.12 Develop a strategy for finding relevant information, including a variety of types of resources (based on the Big6™)</li></ul>

Grade Level	Performance Indicator
5-8	<p>By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p>2.13 Understand organizational systems for resources, both print and non-print.</p> <p>2.14 Independently search the online catalog.</p> <p>2.15 With assistance, select keywords and phrases for using internet search engines and directories, as well as online subscription databases.</p> <p>2.16 Be able to narrow and broaden keywords and phrases.</p> <p>2.17 Change to: “Understand the difference between, and the uses of, primary and secondary sources.”</p> <p>2.18 Map or outline a topic with subtopics.</p> <p>2.19 Develop and use a strategy for locating relevant information in a variety of sources.</p>
9-12	<p>By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p>2.20 Use a strategy for finding relevant information from a variety of sources, and be able to shift the strategy as necessary, based on resource availability and relevance of found data.</p> <p>2.21 Assess the value of various types of electronic resources for data gathering, including databases, internet sites, electronic reference works, community and government electronic resources.</p> <p>2.22 Develop keywords and phrases to search for information.</p> <p>2.23 Use search engines and directories to survey a topic.</p> <p>2.24 Narrow or expand a topic based on preliminary searching.</p> <p>2.25 Select primary and secondary sources as appropriate.</p>

**Standard 3. Locate and access information.**

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

<b>Grade Level</b>	<b>Performance Indicator</b>
PreK-2	<p>By the end of second grade, students will be able to:</p> <ul style="list-style-type: none"><li>3.1 Ask a question that requires information-seeking.</li><li>3.2 Independently find the library media center.</li><li>3.3 Independently approach the library teacher for assistance.</li><li>3.4 Understand that there is a relationship to spine label and book content.</li><li>3.5 Identify shelving order – top to bottom, left to right.</li><li>3.6 Independently locate fiction and non-fiction sections in the school library.</li><li>3.7 Independently locate computers in the school library.</li></ul>
3-4	<p>By the end of fourth grade, students will continue to work on the previous standards as necessary and will also be able to:</p> <ul style="list-style-type: none"><li>3.8 Identify an information need.</li><li>3.9 Know the role and expertise of the library teacher and staff.</li><li>3.10 Understand the organization of the library media center.</li><li>3.11 Exhibit understanding and rudimentary use of Dewey Decimal System.</li><li>3.12 Use library catalog (card or electronic) to locate information sources.</li><li>3.13 With assistance, choose appropriate information source (reference material, subject matter, reading level).</li><li>3.14 Understand differences between materials in reference section.</li><li>3.15 With assistance, use print reference materials appropriately.</li></ul>

<b>Grade Level</b>	<b>Performance Indicator</b>
	<p>3.16 Identify and use table of contents, index, and glossary.</p> <p>3.17 With assistance, find information from maps and charts.</p> <p>3.18 Explore and develop understanding of how to gather information.</p>
5-8	<p>By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p>3.19 Independently choose appropriate information source (subject matter, reading level, and format).</p> <p>3.20 Locate appropriate articles in encyclopedias.</p> <p>3.21 Locate appropriate articles in print periodicals.</p> <p>3.22 Use atlases and almanacs.</p> <p>3.23 Retrieve information from grids, schedules and tables.</p> <p>3.24 Use cross-references to locate additional information.</p> <p>3.25 Recognize inadequacies or gaps in information.</p> <p>3.26 In keeping with the research process outlined in ELA Curriculum Framework and IT Standards, identify electronic sources of information (e.g. Internet, CD-ROM, online periodical databases, online catalogs).</p> <p>3.27 Use technology to locate, evaluate and collect information from a variety of sources.</p> <p>3.28 Use search engines effectively to find relevant, unbiased, and current information on a topic (IT 3.7). Identify source of information with a web address (URL).</p>
9-12	<p>By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p>3.29 Independently develop an information search strategy.</p> <p>3.30 Independently locate information outside the school library</p>

Grade Level	Performance Indicator
	<p>media center.</p> <p>3.31 Use a periodical index.</p> <p>3.32 Use technology to locate, evaluate and collect information from a variety of sources.</p> <p>3.33 Use Boolean operators to query databases for information retrieval.</p> <p>3.34 Search for information within a source.</p> <p>3.35 Evaluate and select the best sources for the information need.</p>

**Standard 4. Use information.**

Students will be able to evaluate resources for their appropriateness (4.a.), select the best and extract the relevant information (4.b.) Students will practice ethical behavior and respect for intellectual property rights (4.c).

**4. a. Evaluation for Appropriateness**

<b>Grade Level</b>	<b>Performance Indicators</b>
PreK - 2	By the end of second grade, students will be able to:  4.1 Distinguish fiction from nonfiction
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 print information, including age of source using copyright date.  4.3 Compare and contrast information from different sources.  4.4 With assistance, distinguish between primary and secondary sources.  4.5 Explore the practice of evaluating web sites (IT 2.3)
5-8	By the end of eighth grade, students will continue to work on previous standard as necessary and will also be able to:  4.6 Independently check copyright date to determine age of information source.  4.6 Independently discriminate between primary and secondary resources.  4.7 Evaluate electronic resources for accuracy, relevance, appropriateness, comprehensiveness and bias (IT 2.3, 2.12, 2.19).

Grade Level	Performance Indicators
9-12	<p>By the end of twelfth grade, students will continue to work on previous standard as necessary and will also be able to:</p> <p>4.8 Practice independent critical thinking when reviewing a potential information source by: distinguishing between verifiable facts and value claims; determining factual accuracy of a statement; detecting bias, identifying unstated assumptions, distinguishing between warranted and unwarranted claims and between relevant and irrelevant information, claims or reasons; recognizing logical inconsistencies or fallacies in a line of reasoning.</p> <p>4.9 Compare and contrast information from different sources.</p> <p>4.10 Routinely evaluate web sites for authenticity when using them (IT 3.14)</p> <p>4.11 Develop a list of authorities on a specific topic</p>

#### 4. b. Extraction of Most Relevant Information

Grade Level	Performance Indicators
PreK - 2	<p>By the end of second grade, with assistance, students be able to:</p> <p>4.12 Sort, classify and sequence pieces of information (e.g. Place events along a timeline, sort families of animals, etc.).</p>
3-4	<p>By the end of fourth grade, students will continue to work on previous standard as necessary and will also be able to:</p> <p>4.13 Read print and non-print material to gather information.</p> <p>4.14 Take notes using guided research forms to extract relevant information.</p> <p>4.15 Choose appropriate order for information (chronological, alphabetical, topical, etc.)</p>

Grade Level	Performance Indicators
	<p>Use provided graphic organizers and outlines to organize information logically.</p> <p>4.16 With assistance, summarize and paraphrase information in own words.</p> <p>4.17 With assistance, organize information from multiple sources.</p>
5-8	<p>By the end of eighth grade, students will continue to work on previous standard as necessary and will also be able to:</p> <p>4.18 Independently take notes.</p> <p>4.19 Summarize and paraphrase information.</p> <p>4.20 Choose appropriate order for information (chronological, alphabetical, hierarchical in terms of importance, persuasive position).</p> <p>4.21 Organize information from multiple sources.</p> <p>4.22 Make inferences from data.</p> <p>4.23 Collaborate with others, including using technology to share information.</p>
9-12	<p>By the end of twelfth grade, students will continue to work on previous standard as necessary and will also be able to:</p> <p>4.24 Create original graphic organizers and outlines.</p> <p>4.25 Extrapolate information found in tables, charts, and graphs.</p> <p>4.26 Gather information to support a point of view in persuasive writing.</p> <p>4.27 Integrate (with correct citation) electronic research results into a research project (IT 3.13)</p>

#### 4. c. Ethical Behavior In Information Use

Grade Level	Performance Indicators
PreK - 2	<p>By the end of second grade, students be able to:</p> <p>4.28 Indicate the source of information</p> <p>4.29 Find and record author and title of an information source</p>
3-4	<p>By the end of fourth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p>4.30 Define plagiarism</p> <p>4.31 Using a provided format, write an appropriate bibliography</p> <p>4.32 Using a provided format, write correct citations for text and images gathered from electronic sources.</p>
5-8	<p>By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p>4.33 Independently write an appropriate bibliography.</p> <p>4.34 Independently create correct citations for text and images gathered from electronic resources.</p> <p>4.35 Demonstrate understanding that use of materials is limited by the fair use rule of copyright law.</p> <p>4.36 Explain and demonstrate ethical and legal behavior in the copying of electronic files (IT 2.7)</p>

Grade Level	Performance Indicators
9-12	<p>By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p>4.37 Demonstrate and advocates for legal and ethical behaviors among peers, family and community regarding the use of technology and information.</p> <p>4.38 Explain the provisions of the school's Acceptable Use Policy in original language, and its importance.</p> <p>4.39 Use quotations and footnotes appropriately.</p> <p>4.40 Cites electronic sources correctly (IT 2.20).</p> <p>4.41 Explains laws restricting use of copyrighted materials on the internet (IT 2.18).</p>

**Standard 5. Synthesize Information**

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

<b>Grade Level</b>	<b>Performance Indicators</b>
Pre-K – 2	By the end of second grade, students be able to:  5.1 Create and share pictures with others  5.2 Use new words or sentences in describing the pictures  5.3 Present a final product using an appropriate format: report, diorama, poster, software program, or other medium of communication
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 Consider the purpose and audience for the product and/or presentation  5.5 Organize the information in a way which is appropriate for the assignment, project, or question
5-8	By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to:  5.6 Use word processing, editing and spelling tools to produce an original product that clearly communicates research results  5.7 Practice collaborative learning skills, when appropriate  5.8 Understand that preparing for a presentation will become a life long skill

Grade Level	Performance Indicators
9-12	<p data-bbox="488 264 1349 331">By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p data-bbox="488 373 1382 441">5.9 Consider the purpose and audience for the product and/or presentation</p> <p data-bbox="488 483 1398 588">5.10 Select an appropriate media format (oral, written, web/multimedia, TV/video) to communicate new understandings and new knowledge</p> <p data-bbox="488 630 1393 697">5.11 Organize the information in a way which is appropriate for the assignment, project, or question</p> <p data-bbox="488 739 1295 806">5.12 Create a storyboard, script, layout or rough draft of research notes</p> <p data-bbox="488 848 1365 953">5.13 Use word processing, editing, dictionary and thesaurus tools to produce a polished, original product that clearly communicates research results</p> <p data-bbox="488 995 1409 1100">5.14 Present a final product using an appropriate format: report, diorama, poster, software program, web page or other medium of communication</p> <p data-bbox="488 1142 959 1171">5.15 Practice collaborative skills</p> <p data-bbox="488 1213 1398 1281">5.16 Understand that preparing for a presentation will become a life long skill</p>

**Standard 6. Participate in Collaborative Activities**

Students participate effectively in groups to pursue and generate information.

Grade Level	Performance Indicators
Pre-K – 2	<p>By the end of second grade, students will continue to work on previous standards as necessary and will also be able to:</p> <ul style="list-style-type: none"><li>6.1 Demonstrate appropriate group conduct (take turns speaking, respect opinions, use library voice)</li><li>6.2 Listen to the information and ideas of others</li><li>6.3 Exhibit an understanding of the rights of other library users</li><li>6.4 Cooperate with others and shares resources and materials</li><li>6.5 Work with other students to create and evaluate simple information products</li><li>6.6 Assist other students with book selection</li><li>6.7 Exhibit proper respect for and care of library materials, facilities, and equipment</li><li>6.8 Understand the layout and organization of the library</li><li>6.9 Understand and follow library rules and procedures</li></ul>
3-4	<p>By the end of fourth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <ul style="list-style-type: none"><li>6.10 Exhibit an understanding of the rights of other library users</li><li>6.11 Work cooperatively with others and share resources and materials</li><li>6.12 Assist other students with book selection</li><li>6.13 Exhibit proper respect for and care of library materials, facilities, and equipment</li><li>6.14 Understand the layout and organization of the library</li><li>6.15 Keep books and materials in order when browsing</li></ul>

Grade Level	Performance Indicators
	<p>6.16 Understand and follow library rules, policies and procedures</p> <p>6.17 Discuss information and ideas with others, listen well and change their own ideas when appropriate</p> <p>6.18 Use information sources, select information and ideas that will contribute directly to the success of group projects</p> <p>6.19 Respect others' ideas and backgrounds and acknowledge their contributions</p> <p>6.20 Encourage consideration of ideas and information from all group members</p> <p>6.21 Respond respectfully to the points of view and ideas of others.</p> <p>6.22 Participate actively in group discussions to analyze information products and solutions</p> <p>6.23 Collaborate with others to design, develop and evaluate information products and suggest solutions.</p>
5-8	<p>By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p>6.24 Participate actively in group discussions to analyze information products and solutions</p> <p>6.25 Using their evaluations and the group's work to improve content, delivery and work habits</p>
9-12	<p>By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p>6.26 Integrate their own knowledge and information with that of others in the group</p> <p>6.27 Actively listen to and respectfully respond to the point of view of others</p>

Grade Level	Performance Indicators
	<p>6.28 Collaborate with others to lead, facilitate, negotiate and otherwise participate in defining the information needs of a group</p> <p>6.29 Participate actively in group discussions to devise solutions to information problems that integrate group members' information and ideas</p> <p>6.30 Work to move the group to consensus after substantive conversations and sharing of information and ideas among all the members of the group</p> <p>6.31 Help organize and integrate the contributions of all the members of the group into information products</p> <p>6.32 Work with others to create and evaluate complex information products that integrate information in a variety of formats</p> <p>6.33 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.</p>

### Standard 7. Evaluate

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

Grade Level	Performance Indicators
<b>PreK - 2</b>	<p>7.1 Using provided checklist or rubric, determine that project is complete and accurate.</p> <p>7.2 Judge the process . Ask questions: What did I like? What was easy? What was difficult? How can I do it better next time?</p> <p>7.3 Judge the product. Ask questions: 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?</p>
<b>3 - 4</b>	<p>By the end of fourth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p>7.4 Conference with peers, teachers, and library teacher during the creation of the product and in final product evaluation.</p>
<b>5 - 8</b>	<p>By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p>7.5 Analyze the evaluation results to improve their communications through developing evaluation criteria and doing self and peer evaluations</p> <p>7.6 With assistance, describe the ethical use of information</p> <p>7.7 Use critical and creative thinking skills to analyze, synthesize and evaluate relevance, reliability, and authority of sources.</p> <p>7.8 Evaluate how effectively they communicate their research results by using predetermined criteria.</p> <p>7.9 Review and evaluate the process of transforming information into knowledge</p>

	<p>7.10 Summarize new knowledge gained through peer presentations.</p>
<b>9-12</b>	<p>By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p>7.11 Voluntarily apply legal principles and ethical conduct related to information technology such as:</p> <ul style="list-style-type: none"><li>• Copyright</li><li>• Plagiarism</li><li>• Privacy</li><li>• Telecomputing etiquette</li><li>• Acceptable use of resources</li></ul>

## 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.

<b>PreK - 2</b>	<p>By the end of the second grade, students will continue to work on previous standards as necessary and will also be able to:</p> <ul style="list-style-type: none"><li>8.1 Understand the importance of the library as an information source.</li><li>8.2 Demonstrate active listening skills</li><li>8.3 Listen to literature for pleasure and information.</li><li>8.4 Use illustrations to acquire a greater understanding of the story</li><li>8.5 Demonstrate the proper care of library materials</li><li>8.6 Use library collection for pleasure reading</li><li>8.7 Understand the difference between an author and an illustrator</li><li>8.8 Demonstrate comprehension of a story heard, read or viewed through verbal discussion and/or written responses or artwork.</li><li>8.9 Share books by favorite authors and illustrators</li><li>8.10 Identify books that are special award winners (e.g. Caldecott and Coretta Scott King Awards) by recognition of symbol on cover.</li></ul>
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3-4	<p>By the end of fourth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p>8.11 Recognize various genres of literature</p> <p>8.12 Demonstrate awareness of literature from various cultures and genres (e.g., nursery rhymes, fairy tales, folklore, poetry)</p> <p>8.13 Make connections among materials read, heard, or viewed</p> <p>8.14 Make predictions in literature</p> <p>8.15 Recognize basic story elements: character, setting and problem</p>
5-8	<p>By the end of eighth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p>8.16 Incorporate critical and creative thinking skills to evaluate literary elements and conventions.</p> <p>8.17 Displays knowledge of various types of print material, of genres, and of selection aids.</p> <p>8.18 Identify and read from a variety of genres(e.g. historical, realistic, fantasy, fiction, folklore, poetry, biography, nonfiction)</p> <p>8.19 Recognize reading as a lifelong pursuit.</p>
9-12	<p>By the end of twelfth grade, students will continue to work on previous standards as necessary and will also be able to:</p> <p>8.20 Recognize characteristic styles of various authors and illustrators.</p> <p>8.21 Identify award-winning books, their selection criteria, and attributes.</p> <p>8.22 Perform preliminary research to enhance appreciation of literature.</p> <p>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.</p>

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## Supplementary Material –Integrated Learning Scenarios

### Minibeast Homes Habitats – Grade 2

<p>Curriculum Framework Standards to be Addressed</p>	<p>English Language Arts</p> <p>1.1 Follow agreed-upon rules for discussion (raising one’s hand, waiting one’s turn, speaking one at a time).</p> <p>2.1 Contribute knowledge to class discussion in order to develop a topic for a class project.</p> <p>7.4 Demonstrate understanding of the various features of written English.</p> <p>8.10 For informational/expository texts: Restate main ideas</p> <p>8.9 For informational/expository texts: Make predictions about the content of a text using prior knowledge and text features (headings, table of contents, key words) and explain whether they were confirmed or disconfirmed, and why.</p> <p>13.1 Identify and use knowledge of common textual features (title, heading, captions, key words, table of contents) /</p> <p>13.2 Identify and use knowledge of common graphic features (illustrations, type size).</p> <p>13.3 Make predictions about the content of a text using prior knowledge and text and graphic features.</p> <p>13.4 Explain whether predictions about the content of a text were confirmed or disconfirmed and why.</p> <p>13.5 Restate main ideas and important facts from a text hard or read.</p> <p>24.1 Generate questions and gather information from several sources in a classroom, school, or public library.</p> <p>Science and Technology/Engineering</p> <p>1. Recognize that animals (including humans) and plants are living things that grow, reproduce, and need food, air and water.</p> <p>6. Recognize that people and other animals interact with their environment through their senses of sight, hearing, touch, smell and taste.</p> <p>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).</p> <p>Instructional Technology, Exploratory Concepts and Skills Strand</p>
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	<p>3.1 Explore and develop understanding of how to gather information from a variety of electronic sources, including teacher-selected web sites, CDROM encyclopedias and automated card catalog.</p>
<p>Information Fluency Skills Performance Indicators</p>	<p>1. Define the information task.</p> <p>1.11 Understand the criteria for the research assignment.  1.12 Explain what the final product will look like.  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 Develop subsidiary questions to help address the essential question.  1.17 Identify pre-existing knowledge, as well as additional information necessary to solve the problem.  Skim and read from print and electronic general reference sources to gain an overview of the topic.</p> <p>2. Develop information-seeking strategies</p> <p>2.14 Understand organizational systems for resources, both print and non-print.  2.15 Independently search the online catalog.  2.16 With assistance, select keywords and phrases for using internet search engines and directories, as well as online subscription databases.  2.17 Be able to narrow and broaden keywords and phrases.  2.18 Make a distinction between primary and secondary sources, and the uses of each.  2.19 Map or outline a topic with subtopics.  2.20 Develop and use a strategy for locating relevant information in a variety of sources.</p> <p>3. Locate and access information.</p> <p>3.29 Independently choose appropriate information source (subject matter, reading level) and format.  3.20 Locate appropriate articles in encyclopedias  3.21 Locate appropriate articles in print periodicals  3.24 Use cross-references to locate additional information  3.25 Recognize inadequacies or gaps in information  3.26 Identify electronic sources of information (e.g. internet, CDROM, online periodical databases, online catalogs)  3.27 Use technology to locate, evaluate and collect information from a variety of sources.</p>

	<p>4. Use information</p> <p>4a. Evaluation for appropriateness.</p> <p>4.6 Independently check copyright date to determine age of information source.</p> <p>4.7 Independently discriminate between primary and secondary resources.</p> <p>4.8 Evaluate electronic resources for accuracy, relevance, appropriateness, comprehensiveness, and bias.</p> <p>4b. Extraction of most relevant information</p> <p>4.18 Independently take notes.</p> <p>4.19 Summarize and paraphrase information</p> <p>4.20 Choose appropriate order for information.</p> <p>4.21 Organize information from multiple sources.</p> <p>4.22 Make inferences from data.</p> <p>4.23 Collaorate with others, including using technology to share information.</p> <p>4c. Ethical behavior in information use.</p> <p>4.34 Independently write an appropriate bibliography.</p> <p>4.35 Independently create correct citations for text and images gathered from electronic resources.</p> <p>5. Synthesize information</p> <p>5.8 Consider the purpose and audience for the product and/or presentation.</p> <p>5.9 Organize the information in a way which is appropriate for the assignment, project or question.</p> <p>5.10 Use word processing, editing and spelling tools to produce an original product that clearly communicates research results.</p> <p>5.11 Present a final product using an appropriate format.</p> <p>5.12 Practice collaborative learning skills, when appropriate.</p> <p>5.13 Understand that preparing for a presentation will become a lifelong skill.</p> <p>6. Participate in collaborative activities. Participate actively in group discussions to analyze information products and solutions. Use their evaluations and the group's work to improve content, delivery and work habits.</p> <p>7. Evaluate</p>
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	<p>7.6 Analyze the evaluation results to improve communications through developing evaluation criteria and doing self and peer evaluations.</p> <p>7.7 With assistance, describe the ethical use of information.</p> <p>7.8 Use critical and creative thinking skills to analyze, synthesize and evaluate relevance, reliability, and authority of sources.</p> <p>7.9 Evaluate how effectively student communicates his/her research results by using predetermined criteria.</p> <p>7.10 Review and evaluate the process of transforming information into knowledge.</p> <p>7.11 Summarize new knowledge gained through peer presentations.</p>
<p><b>Lesson Description</b></p>	<p>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 zoo. Students will decide what Minibeast to include in their zoo and what kind of habitats the Minibeast will need.</p> <p><b>Time Frame:</b> 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 about 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 then the class has their scheduled class library visit.</p> <p><b>Instructional Strategies</b></p> <p><b>Key Concepts</b> What are the key components of a natural habitat?</p> <p><b>Specific Skills</b> Students will be able to:</p> <ol style="list-style-type: none"> <li>1. Rephrase the classroom assignment. What am I supposed</li> </ol>

	<p>to do?</p> <ol style="list-style-type: none"> <li>2. List some types of resources on the topic that might be helpful.</li> <li>3. Complete a topic chart. What I know, What I think I Know, What I need to find out</li> <li>4. Brainstorm question about the topic.</li> <li>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.</li> <li>6. Determine which resources are the best to use and tell why.</li> <li>7. Web or map a topic from background information and preliminary searching.</li> <li>8. Recognize the online catalog as a tool for locating media center materials.</li> <li>9. Skim through an easy informational book to find something specific.</li> <li>10. Understand the procedures for use of library media center materials.</li> </ol>
<p><b>Performance and Evaluation</b></p>	<p><b>Activities and Procedures</b>  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 the Minibeast Notetaking Form (see below). Students will:</p> <ol style="list-style-type: none"> <li>1. Gather and/or read information on minibeasts from a variety of sources, including the classroom, library media center, and the public library.</li> <li>2. Determine which resources are best to use and tell why.</li> <li>3. Web or map a minibeast from background information and preliminary searching.</li> <li>4. Sort and select materials on a specific minibeast.</li> <li>5. Browse through magazines and books for visual information.</li> <li>6. Skim through an easy informational book to find something specific.</li> <li>7. Read, view or listen for relevant information.</li> <li>8. Orally, contribute new information to the understanding of the topic.</li> <li>9. Relate details to the topic in a sentence or paragraph.</li> </ol> <p><b>Extensions and Modifications</b>  Students will draw/illustrate their minibeast in their natural habitat. Students will also be given the option to create dioramas.  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.</p>

**Name of Minibeast**

<b>Food and Water</b>	<b>Light, Air and Space</b>
<b>Shelter</b>	<b>Other Plants and Animals</b>

Taken from:

Developing An Information Literacy Program K-12: A How-To-Do-It Manual,  
Iowa City Community School District.

## Oh Canada! An Inquiry Model - Grade 5

Focus: Geography and People of North America

Curriculum Framework Standards to be Assessed	<p>Massachusetts History and Social Studies Curriculum Framework</p> <p>4.17 On a map of North America, locate Canada, its provinces, and major cities (G).</p> <p>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).</p> <p>Instructional Technology Indicators</p> <p>1.7 Collaborate with classmates to use teacher-selected Web sites.</p> <p>3.1 Explore and develop understanding of how to gather information from a variety of electronic sources, including teacher-selected Web sites, CDROM encyclopedias and automated card catalog.</p> <p>3.2 Explore the use of application programs (i.e. word processing, database, and spreadsheet) for organizing information into charts, tables and diagrams.</p> <p>3.3 Explore the use of content specific tools to enhance the understanding of curriculum content (e.g., environmental probes, sensors, robotics, simulation software, and measuring devices).</p> <p>3.4 Collaborate with classmates and teacher in creating a multimedia presentation to communicate learning with others.</p> <p>Massachusetts ELA Curriculum Frameworks</p> <p>“General Standard 13: Nonfiction Students will identify, analyze and apply knowledge of the purpose, structure and elements of nonfiction or informational materials and provide evidence from the text to support their understanding.” (ELA, 50)</p> <p>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.</p> <p>“General Standard 24: Research Students will gather information from a variety of sources, analyze and evaluate the quality of information they obtain, and use it to</p>
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	<p>answer their own question. “ (ELA, 87)</p> <p>24.1 Generate questions and gather information from several sources in a classroom, school, or public library.</p> <p>24.2 Identify and apply steps in conducting and reporting research.</p> <ul style="list-style-type: none"> <li>• Define the need for information and formulate open-ended research questions</li> <li>• Initiate a plan for searching for information</li> <li>• Locate resources</li> <li>• Interpret, use and communicate the information</li> <li>• Evaluate the research project as a whole</li> </ul> <p>General Standard 27: Media Production Students will design and create coherent media productions (audio, video, television, multimedia, internet, emerging technologies) with a clear controlling idea, adequate detail, and appropriate consideration of audience, purpose and medium” (ELA 96)</p> <p>27.1 Create radio scripts, audiotapes, or videotapes for display or transmission.</p> <p>27.2 Create presentations using computer technology</p>
<p>Information fluency Standards to be Assessed</p>	<p>1.4 With assistance, list the criteria for a research assignment.</p> <p>1.5 Demonstrate overall understanding of the final product, e.g. “I need to create a... (presentation, diorama, poster, essay, etc.)</p> <p>1.6 Use the teacher-selected essential question to develop a topic focus.</p> <p>1,7 Gather background information by reading, viewing or listening to a variety of pre-selected and self-selected resources.</p> <p>1.8 As a class, practice developing student-driven essential questions.</p> <p>1.9 As a class, develop subsidiary questions to answer in solving an information problem.</p> <p>1.10 Identify existing knowledge as well as additional information necessary to solve the problem.</p> <p>2.9 Identify key words that will enable information to be located on a topic.</p> <p>2.10 Use the online catalog with assistance to find information sources in the school library.</p> <p>2.12 Web, map or diagram a main topic with sub-topics.</p> <p>2,13 Develop a strategy for finding relevant information, including a variety of types of resources (bases on the Big6™)</p> <p>3.8 Identify an information need.</p> <p>3.9 Know the role and expertise of the library teacher and staff.</p> <p>3.10 Understand the organization of the library media center.</p> <p>3.11 Exhibit understanding and rudimentary use of the Dewey Decimal System.</p> <p>3.12 Use the library catalog (card or electronic) to locate</p>

	<p>information sources.</p> <p>3.12 Classify information sources according to common characteristics.</p> <p>3.13 With assistance, choose appropriate information source</p> <p>3.14 Understand differences between materials in reference section: almanac, atlas, dictionary, thesaurus, encyclopedia.</p> <p>3.15 With assistance, use print reference materials appropriately</p> <p>3.16 Identify and use table of contents, index, glossary</p> <p>3.17 With assistance, find information from maps and charts</p> <p>3.18 Explore and develop understanding of how to gather information</p> <p>4.14 Read print and non-print material to gather information</p> <p>4.15 Take notes using guided research forms to extract relevant information</p> <p>4.15 Choose appropriate order for information (chronological, alphabetical, topical, etc.)</p> <p>4.16 Use provided graphic organizers and outlines to organize information logically</p> <p>4.17 With assistance, summarize and paraphrase information in own words.</p> <p>5.4 Consider the purpose and audience for the product and/or presentation</p> <p>5.5 Organize the information in a way which is appropriate for the assignment, project or question.</p> <p>5.7 Present a final product using an appropriate format: report, diorama, poster, software program or other medium of communication</p> <p>7.4 Conference with peers, teachers and library teacher during the creation of the product and in final product evaluation.</p>
Scenario	<p>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.</p> <p>With a partner, 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.</p>
Tasks and Process	<p>Choose <b>one</b> of these Provinces or Territories:</p> <ul style="list-style-type: none"> <li>• Alberta</li> <li>• British Columbia</li> <li>• Manitoba</li> <li>• New Brunswick</li> <li>• Newfoundland</li> <li>• Northwest Territories</li> </ul>

	<ul style="list-style-type: none"> <li>• Nova Scotia</li> <li>• Nunavut</li> <li>• Ontario</li> <li>• Prince Edward Island</li> <li>• Quebec</li> <li>• Saskatchewan</li> <li>• Yukon Territory</li> </ul> <p>Your promotional project should include information about the climate, physical geography and natural resources. Explain how these have influenced the settlement, trade and economy of the province or territory.</p>
Questions	<p>Essential Question: How do climate, physical geography, and natural resources affect the people of Canada?</p> <p>Subsidiary questions:</p> <ul style="list-style-type: none"> <li>• What is the climate? Look at: distance from large bodies of water, elevation, precipitation, and ranges in temperature</li> <li>• What are the physical geographic landforms in the province/territory?</li> <li>• What are the natural resources in your province/territory?</li> <li>• How are the natural resources linked to the physical geography?</li> <li>• What are the major cities?</li> <li>• What languages are spoken?</li> <li>• Which cultures are represented in this province/territory?</li> <li>• What kinds of jobs do people have?</li> <li>• How do people travel about the province/territory?</li> <li>• How does climate affect the goods and services produced?</li> </ul>
Process	<p><b>Gather</b> information about your province-territory from a variety of sources. Be sure to document the source of your information. <b>Synthesize:</b> Use your information to create your promotional material.</p> <p>Directions are provided for creating the brochure. “Remember, the purpose is to excite people to come and visit your province/territory.” There is a template to help you get started.</p> <p>Directions are provided for creating a radio ad, with a template for storyboard.</p> <p>Directions are provided for creating a television commercial with a template for a storyboard.</p>

	<p><b>Evaluate:</b> 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.</p> <p><b>Couch Potato Review:</b> Students peer review the Ads, using a provided chart to take notes.</p> <p><b>Reflection:</b> Students write a journal article about which region of Canada they would like to visit, and why.</p>
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Taken from:

Chase, Cheryl Caskie. Oh, Canada! An Inquiry Model. 26 Sept. 2004. Dover-Sherborn Regional School District. 29 Dec. 2006 <<http://www.doversherborn.org/doverelementary/Library/CANADA/>>.

***Conflict!***  
**English Language Arts – Grade 8**

Curriculum Framework standards to be assessed	<p>English Language Arts</p> <p><u>ELA 2</u>: Students will pose questions, listen to the ideas of others, and contribute their own information or ideas in group discussions or interviews in order to acquire new knowledge.</p> <p><u>ELA 3</u>: Students will make oral presentations that demonstrate appropriate consideration of audience, purpose, and the information to be conveyed.</p> <p><u>ELA 8</u>: Students will identify the basic facts and main ideas in a text and use them as the basis for interpretation.</p> <p><u>ELA 9</u>: Making Connections: Students will deepen their understanding of a literary or non-literary work by relating it to its contemporary context or historical background.</p> <p><u>ELA 11</u>: Theme: Students will identify, analyze, and apply knowledge of theme in a literary work and provide evidence from the text to support their understanding.</p> <p><u>ELA 12</u>: Students will identify, analyze, and apply knowledge of the structure and elements of fiction and provide evidence from the text to support their understanding.</p> <p><u>ELA 13</u>: <i>Nonfiction</i>: Students will identify, analyze, and apply knowledge of the purpose, structure, and elements of nonfiction or informational materials and provide evidence from the text to support their understanding.</p> <p><u>ELA 20</u>: <i>Consideration of Audience and Purpose</i>: Students will write for different audiences and purposes.</p> <p><u>ELA 24</u>: <i>Research</i>: 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.</p> <p><u>ELA 25</u>: <i>Evaluating Writing and Presentations</i>: Students will develop and use appropriate rhetorical, logical, and stylistic criteria for assessing final versions of their compositions or research projects before presenting them to varied audiences.</p> <p><u>ELA 26</u>: <i>Analysis of Media</i>: Students will identify, analyze, and apply knowledge of the conventions, elements, and techniques of...the Internet,...and provide evidence from the works to support their understanding.</p> <p>History and Social Sciences</p> <p><u>World History 2.18</u> (p.59): Summarize the major events and consequences of World War I:  <u>E</u>. The Armenian genocide in Turkey.</p>
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	<p><u>WH 2.26</u> (p.60): 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.</p> <p><u>WH 2.39</u> (p.62): 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.</p> <p><u>WH 2.43</u> (p.63): Identify the sources of ethnic and religious conflicts in the following nations and regions: Northern Ireland; the Balkans; Sudan and Rwanda; Sri Lanka; Kashmir.</p> <p><u>WH 2.44</u> (p.63): Explain the reasons for the fall of apartheid in South Africa...</p> <p><u>WH 2.47</u> (p.63): 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.</p> <p>Instructional Technology Standards</p> <p><u>IT 2</u>: Demonstrate responsible use of technology and an understanding of ethics and safety issues in using electronic media.</p> <p><u>IT 2.12</u>: Validate a website for authenticity.</p> <p><u>IT 2.14</u>: Write correct citations for text and images gathered from electronic sources. Understand that use of materials is limited by the fair use rule of copyright law.</p> <p><u>IT 3</u> (p.14): Demonstrate ability to use technology for research, problem-solving, and communication. Students locate, evaluate, collect, and process information from a variety of electronic sources...</p> <p><u>IT 3.6</u>: In keeping with the research process outlined in Standard 24 of the <i>English Language Arts Curriculum Framework</i>, identify electronic sources of information...</p> <p><u>IT 3.7</u>: Use search engines effectively to find relevant, unbiased and current information on a subject. (Standard 2 performance indicators apply – ie, evaluate websites and write correct citations for sources.)</p>
<p>Information fluency skills performance indicators</p>	<p>information fluency standards</p> <p><i>1. Define the information task.</i></p> <p>1.11 Understand the criteria for the research assignment.</p> <p>1.12 Explain what the final product will look like.</p> <p>1.13 Select a topic from a range of possibilities.</p> <p>1.14 Use the teacher-provided essential question to develop a topic focus, or develop a self-selected essential question.</p> <p>1.15 With assistance, develop a thesis statement.</p> <p>1.16 Develop subsidiary questions to help address the essential question.</p> <p>1.17 Identify pre-existing knowledge, as well as additional information</p>

	<p>necessary to solve the problem.</p> <p>1.18 Skim and read from print and electronic general reference sources to gain an overview of the topic.</p> <p><i>2. Develop information-seeking strategies.</i></p> <p>2.14 Understand organizational systems for resources, both print and non-print.</p> <p>2.15 Independently search the online catalog.</p> <p>2.16 With assistance, select keywords and phrases for using internet search engines and directories, as well as online subscription databases.</p> <p>2.17 Be able to narrow and broaden keywords and phrases.</p> <p>2.18 Make a distinction between primary and secondary sources, and the uses of each.</p> <p>2.19 Map or outline a topic with subtopics.</p> <p>2.20 Develop and use a strategy for locating relevant information in a variety of sources.</p> <p><i>3. Locate and access information.</i></p> <p>3.19 Independently choose appropriate information source (subject matter, reading level) and format.</p> <p>3.20 Locate appropriate articles in encyclopedias.</p> <p>3.21 Locate appropriate articles in print periodicals.</p> <p>3.22 Use atlases and almanacs.</p> <p>3.23 Explore primary and secondary resources.</p> <p>3.24 Use cross-references to locate additional information.</p> <p>3.25 Recognize inadequacies or gaps in information.</p> <p>3.26 In keeping with the research process outlined in ELA Curriculum Framework and IT Standards, identify electronic sources of information (e.g. Internet, CD-ROM, online periodical databases, online catalogs)</p> <p>3.27 Use technology to locate, evaluate and collect information from a variety of sources.</p> <p>3.28 Use search engines effectively to find relevant, unbiased, and current information on a topic (IT 3.7). Identify source of information with a web address (URL)</p> <p><i>4. Use information.</i></p>
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*4. a. Evaluation for appropriateness.*

4.6 Independently check copyright date to determine age of information source.

4.7 Independently discriminate between primary and secondary resources.

4.8 Evaluate electronic resources for accuracy, relevance, appropriateness, comprehensiveness and bias (IT 2.12).

*4.b. Extraction of most relevant information.*

4.19 Independently take notes.

4.20 Summarize and paraphrase information.

4.21 Choose appropriate order for information (chronological, alphabetical, hierarchical in terms of importance, persuasive position).

4.22 Organize information from multiple sources.

4.23 Make inferences from data.

4.24 Collaborate with others, including using technology to share information.

*4.c. Ethical behavior in information use.*

4.34 Independently write an appropriate bibliography.

4.35 Independently create correct citations for text and images gathered from electronic resources.

4.36 Demonstrate understanding that use of materials is limited by the fair use rule of copyright law.

4.37 Explain and demonstrate ethical and legal behavior in the copying of electronic files (IT 2.7)

*5. Synthesize information.*

5.8 Consider the purpose and audience for the product and/or presentation

5.9 Organize the information in a way which is appropriate for the assignment, project, or question

5.10 Use word processing, editing and spelling tools to produce an original product that clearly communicates research results

5.11 Present a final product using an appropriate format: report, diorama, poster, software program, web page or other medium of communication

5.12 Practice collaborative learning skills, when appropriate

5.13 Understand that preparing for a presentation will become a life long skill

*6. Participate in collaborative activities.*

	<p>6.23 Participate actively in group discussions to analyze information products and solutions.</p> <p>6.24 Using their evaluations and the group’s work to improve content, delivery and work habits.</p> <p><i>7. Evaluate.</i></p> <p>7.6 Analyze the evaluation results to improve their communications through developing evaluation criteria and doing self and peer evaluations</p> <p>7.7 With assistance, describe the ethical use of information</p> <p>7.8 Use critical and creative thinking skills to analyze, synthesize and evaluate relevance, reliability, and authority of sources.</p> <p>7.9 Evaluate how effectively they communicate their research results by using predetermined criteria.</p> <p>7.10 Review and evaluate the process of transforming information into knowledge</p> <p>7.11 Summarize new knowledge gained through peer presentations.</p> <p><i>8. Appreciate literature.</i></p> <p>8.16 Incorporate critical and creative thinking skills to evaluate literary elements and conventions.</p>
Lesson description	<p>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. The activities are as follows:</p> <ul style="list-style-type: none"> <li>• After reading books and short stories (as a class) about people who lived through and experienced the Holocaust, in small groups, students choose another fiction book from a specified list about another ethnic or religious conflict.</li> <li>• 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.</li> <li>• Students 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 plea to</li> </ul>

	<p>the UN Commission on Human Rights, explaining the conflict and asking the UN to intervene. Students who have read the same novel may work on the research and presentation in groups.</p> <ul style="list-style-type: none"> <li>• After hearing the pleas of their classmates, students fill out a guided listening sheet demonstrating that they have learned about the conflicts in the other books as well as their own.</li> <li>• 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.</li> </ul> <p><b>Time Frame:</b> Beginning with the time that they have a chosen novel in hand and can begin to read, students have four weeks to read it and respond in their reading journals. The research about their country and preparation for their presentation takes 5-6 days. The classroom presentations take an additional three days. All together, the project takes about six weeks.</p>
Optional extensions	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> </ul>
Performance and evaluation	<p>Students are evaluated at many steps in the process. These include:</p> <ul style="list-style-type: none"> <li>• Completeness of reading journal.</li> <li>• Ability to work efficiently and effectively in a group.</li> <li>• Research process.</li> <li>• Final presentations that demonstrate understanding of the country's difficulties, as well as major plot and character elements.</li> <li>• Thoughtful, well-written final essay about conflicts.</li> <li>• Optional: <ul style="list-style-type: none"> <li>○ Written proverb discussion</li> <li>○ Poem</li> </ul> </li> </ul>

The *Conflict!* lesson was developed primarily by Deborah Owen, Library Teacher, with assistance from Kirsten Wright, 8<sup>th</sup> grade ELA teacher  
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## Grade 12 – Initiating a Research Project

<p><b>Curriculum Frameworks</b></p>	<p><b>English Language Arts Composition Strand</b></p> <p>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</p> <p><b>Social Studies History and Geography</b></p> <p>5. Explain how a cause and effect relationship is different from a sequence or correlation of events. (H,C,E)</p> <p>6. Distinguish between long-term and short-term cause and effect relationships (H,G,C,E)</p> <p>7. Show connections, causal and otherwise, between particular historical events and ideas and larger social, economic, and political trends and developments. (H,G,C,E)</p> <p>9. Distinguish intended from unintended consequences. (H,E,C)</p> <p>10. Distinguish historical fact from opinion. (H,E,C)</p> <p><b>U.S. History II</b> (Students would choose from topics below)</p> <p>US11.29 Analyze the presidency of Ronald Reagan.</p> <p>USII.30 Describe some of the major economic and social trends of the late 20<sup>th</sup> century. (H,E)</p> <p>USII.31 Analyze the important domestic policies and events of the Clinton presidency. (H,E)</p> <p>USII.32 Explain the importance of the 2000 presidential election. (H,C)</p> <p>Usii.33 Analyze the course and consequences of America’s recent diplomatic initiatives. (H,C)</p>
<p><b>Technology Performance Indicators</b></p>	<p>1.53 Know how to select and use search engines. Understand the differences between search engines.</p> <p>2.19 Evaluate electronic sources of information.</p> <p>2.20 Cite electronic sources correctly.</p> <p>3. Demonstrate ability to use technology for research, problem-solving, and communication. Students locate, evaluate, collect and process information from a variety of electronic source</p> <p>3.7 Use search engines effectively to find relevant,</p>

	<p>unbiased, and current information on a subject.</p> <p>3.12 In conducting research use all appropriate electronic resources.</p>
<b>Information fluency Performance Indicators</b>	<p>1.21 Develop an essential question to answer</p> <p>1.22 Skim/read reference sources to provide background information and generate subsidiary questions.</p> <p>1.23 Develop a thesis statement, demonstrating a particular point of view.</p> <p>2.22 Use a strategy for finding relevant information from a variety of sources, and be able to shift the strategy as necessary, based on resource availability and relevance of found data.</p> <p>2.23 Assess the value of various types of electronic resources for data gathering, including databases, internet sites, electronic reference works, community and government electronic resources.</p> <p>2.24 Develop keywords and phrases to search for information.</p> <p>2.25 Use search engines and directories to survey a topic.</p> <p>2.26 Narrow or expand a topic based on preliminary searching.</p> <p>2.27 Select primary and secondary sources as appropriate.</p> <p>3.29 Independently develop an information search strategy.</p> <p>3.32 Use technology to locate, evaluate and collect information from a variety of sources.</p> <p>3.33 Use Boolean operators to query databases for information.</p> <p>3.34 Search for information within a source.</p> <p>3.35 Evaluate and select the best sources for the information need.</p> <p>4.9 Practice independent critical thinking when reviewing a potential information source by: distinguishing between verifiable facts and value claims; determining factual accuracy of a statement detecting bias, identifying unstated assumptions, distinguishing between warranted and unwarranted claims and between relevant and irrelevant information, claims or reasons; recognizing local inconsistencies or fallacies in a line of reasoning.</p>
<b>Introduction</b>	<p>Students in the Contemporary American History class come to the library to start work on their quarterly projects, which are position papers 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</p>

	<p>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.</p>
<b>Practice/Assessment</b>	<p>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 for citation format. (Students have chosen topics during consultation with the History Teacher, who has already discussed resource availability with the Library Teacher.) 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 and visually assessing the progress of each student and offering advice on searching and recording practices, if necessary. The class returns to the Library for information searching until they have enough information to draft their papers.</p>
<b>Culminating Performance and Evaluation</b>	<p>Students submit their research papers for evaluation according to 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.</p>

Created by Carol Holley, Library Teacher from the Willow Hill School, Sudbury, MA