

**Information: Find It; Use It; Respect It; Enjoy It; Everyday!**

**A Science Collaborative Information Inquiry Unit**

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## **Information: Find it; Use it; Respect it; Enjoy it; Everyday!**

### **Description of Student Audience**

I am currently employed as a middle school media specialist for a small rural school in southern Indiana. With a 99% white ethnicity, we lack a diverse cultural background. Twenty-seven percent of our students are on free or reduced lunch. Our students consistently score higher than the state average on both the math and language arts ISTEP tests and we almost always outscore the other three middle schools in our county in both areas. Unfortunately, we did not make AYP (Adequate Yearly Progress) as required by No Child Left Behind because of the number of special needs students who did not pass ISTEP.

With an enrollment of 435 in grades 6-8, I am fortunate to have the assistance of a full time library media aide with five years of experience. Since she can supervise the day-to-day running of the media center and catalog new materials, I am able focus on promoting reading and being involved with collaborative teaching activities. Currently, I conduct extensive units with the 8<sup>th</sup> grade language arts and social studies teachers. I also collaborate on projects with the health teacher for grades 7 and 8 and the social studies teacher for grade 7. At the 6<sup>th</sup> grade level, I provide a 10 day introductory library skills unit through the language arts classes focusing on how to locate materials in our library and how to access and use electronic library resources. I also participate in cooperative enrichment/remediation activities on a routine basis with the 6<sup>th</sup> grade social studies teacher. The family and consumer science teacher and I also work cooperatively on units related to nutrition and child development. Nowhere on this list is a science teacher. Therefore, I will describe two proposed science units, one for grade 6 and one for grade 8, involving information inquiry. It is my intent to present these units to the respective teachers in an attempt to foster a relationship with the science department. Also, the science department is receiving more attention due to the results of our 2005 7<sup>th</sup> grade Science ISTEP scores in which only 59% of our students passed.

The 6<sup>th</sup> graders feed in from two elementary schools, one with five classes of students and one with only one class. Also, at the 5<sup>th</sup> grade level, gifted/talented students are grouped together into one class. Here, at the middle school, with the exception of one advanced math class and a small group of special needs students who require specialized math and language arts classes, students of all ability levels are intermixed. The 8<sup>th</sup> graders are also randomly grouped regardless of ability level; however, with advanced math and language courses only offered one period each day, more advanced students will end up congregated in two to three class periods.

Although our 6<sup>th</sup> grade this year is considerable larger (166 sixth graders as compared to 132 eighth graders), next year the 6<sup>th</sup> and 8<sup>th</sup> grades will be approximately the same size. This results in an average of 22 students per class. Unfortunately, due to scheduling conflicts, some classes are much larger and others are smaller. Both the 6<sup>th</sup> grade and the 8<sup>th</sup> grade science classes, like all other core classes, meet on a daily basis for 46 minutes each.

In previous years, our 6<sup>th</sup> grade science teacher has discovered that science was considered an extra class and was not always taught in an organized manner building on concepts, knowledge, and skills. Each of the elementary teachers taught the units that he or she considered interesting or fun. Therefore, not each incoming 6th grader

enters with the same science background. In fact, at the beginning of this past school year, a 6<sup>th</sup> grader commented, “We are really doing science here.” Fortunately, with the implementation of the Science Academic Standards, we feel this situation will improve.

The information literacy skills of the entering 6<sup>th</sup> grade students are nonexistent. Last week during 5<sup>th</sup> grade visitation, a student asked the question, “Why are there numbers and letters on the ends of the bookshelves?” I have found no evidence that any of the students (other than the gifted/talented students) do any type of research other than a very controlled method of locating basic facts as is typical of a “bird unit” as described by David Loertscher in his book Reinventing Indiana's School Library Media Programs in the Age of Technology: A Handbook for Principals and Superintendents. Our incoming students do not understand the organization of a print encyclopedia. They have had no exposure to either an electronic or old-fashioned card catalog for locating resources. They do not know the difference between a url (Web address) as compared to a key word search. Note-taking strategies have never been addressed on a consistent basis. Finally, they are completely unaware of the concept of evaluating resources to decide if they should be used or not. Needless to say, when our incoming 6<sup>th</sup> grade students arrive, we start from square one.

The 6<sup>th</sup> and 8<sup>th</sup> grade middle school students are typical of most small school, rural students. Their interests are varied but also similar. As expected, sports, especially basketball, football, and volleyball, are important to some. Others focus on more social activities. As a faculty, we have to address normal concerns such as students’ lack of self-motivation, organization, and responsibility, as well as attempting to meet the needs of included special needs students. We have not found any one thing that improves student motivation; however, we have or will be implementing a variety of strategies as we try to motivate more underachieving students.

Developing technology related projects and/or activities works well with some students. With others, it just increases their frustrations. As a faculty, we have developed a system of extrinsic rewards based on homework since our philosophy is that students must do their homework in order to succeed. This method helps motivate some students, but again, it has no effect on other students. The most successful method is to teach something the students like or want to learn about. Unfortunately, this is not the same for each student. For example, one of our most problematic 8<sup>th</sup> students completed every assignment related to the Holocaust. This was undoubtedly the most work he had ever done at the middle school. With a new school improvement task force entitled “Failure Is Not an Option,” we are continuously seeking new or different ways to motivate all of our students. In the science units I am creating, I will incorporate the use of community members to make the assignment “real world”, thus improving student motivation.

### **Information Inquiry Role**

As teachers are discovering, it is extremely difficult to cover all of the standards in depth. Therefore, we are finding creative ways to cover more than one standard at a time. Often, these projects will focus on information inquiry. After extensive review of the language arts and content area standards and a resource entitled Developing an Information Literacy Program K-12 developed by The Iowa City Community School District and edited by Mary Jo Langhorne, I have collaborated with language arts

teachers at each grade level to develop a plan for ensuring that our students are exposed to essential skills that allow them to locate, evaluate, use, and enjoy information effectively and efficiently. This plan will be shared with content area teachers so that all class projects can support this plan. Also, in collaboration, we have developed projects ensuring that students are exposed to a variety of technology software programs. This is especially helpful since content teachers are now aware of what informational skills students already possess and on what areas they should focus as well as what types of software they have experience. As a school, we now have common goals as is indicated as essential in our “Failure Is Not an Option” philosophy which has been influenced by the book Failure Is Not an Option: Six Principles that Guide Student Achievement in High-Performing Schools by Alan M Blankstein Here is the basis of our plan.

- Grade 6:
- \*Students are introduced to how to use the library catalog, library resources, World Book Online, INSPIRE and general internet sites. Usually sites and/or keywords are provided.
  - \*Students begin to evaluate Web sites based on authority, accuracy, and relevancy.
  - \*Students use appropriate teacher-created forms to collect notes.
  - \*Students use “Works Cited” created by the media specialist to collect bibliographic information.
  - \*Projects focus on use of Microsoft Word including the use of drawing tools and Word Art and PowerPoint.
- Grade 7:
- \*Students learn strategies for locating information on the Internet.
  - \*Students continue evaluating Web sites for authority, accuracy, and relevancy; however, design and currency are also emphasized.
  - \*Students use teacher-created note collecting forms or develop their own collection tool.
  - \*Students use “Work Cited” forms, but also but also learn how to type the final form using a hanging indent.
  - \*Projects focus on the use of Microsoft Word Tables, Excel, and PowerPoint (in which the use of hypertext allows students to create nonlinear projects).
- Grade 8:
- \*Students effectively locate information on the Internet. Emphasis is placed on using INSPIRE.
  - \*Students continue evaluating Web sites for authority, accuracy, relevancy, design and currency; however, objectivity is emphasized. (This is accomplished through the use of a tool I created and refer to as AACORD.)
  - \*All “Works Cited” papers are required to be self-assessed using a checklist. The final submission must be typed.
  - \*Projects focus on the use of Word, Excel, PowerPoint (inserting graphs), and Publisher. Web page design is introduced to a limited number.

Collaboration allows teachers to incorporate standards from more than one content area at a time. Until this time, none of our science teachers have been involved in a collaborative unit. It is important to know the strengths and weaknesses of any teacher with whom collaboration might be developed. The 6<sup>th</sup> grade science teacher has eight years of experience in three different schools including a private school, a larger middle school, and our own smaller middle school. She is dedicated, excited, creative, and extremely well-organized. However, she has **limited** computer skills; therefore she avoids technology related science units. Also, she prefers working in a strongly controlled environment and admits that working in a collaborative setting is difficult for her.

The 8<sup>th</sup> grade science teacher has twenty-seven years of experience teaching not only the same subject, but also in the same classroom. However, with the advent of the Indiana Academic Science Standards, he has now found himself teaching a new curriculum. His usual method of teaching is lecturing. His computer skills are also **limited** and he finds technology frustrating. Furthermore, he prefers to have all students doing the same thing at the same time rather than working in groups or individually. Although new ideas and teaching methods intrigue him, he admittedly states that he does not like change and lacks the confidence and the energy to try these new ideas.

Since technology is a weakness for both of these teachers, I will be the lead teacher when these activities take place. Although, we often separate the classes in order to create smaller sizes for lab work or introduction and practice of totally new essential informational skill during collaborative units, there is usually one small class that can be left “whole.” The teacher and I will team teach this class. Based on our assigned responsibilities with “divided” classes, one of us will remain the lead teacher. This method allows both of us to see what the other one is doing. It strengthens our coordinated effort and allows the science teachers to gain technology skills.

Information inquiry is the focus of the following two science units, one for the 6<sup>th</sup> grade called “Are Worms Really Yucky?” and another for the 8<sup>th</sup> grade called “Can You Stand the Heat?” In science class, 6<sup>th</sup> grade students will be studying a chapter in their textbook (Indiana Science: Grade 6 published by Glencoe Science) entitled “Earth’s Changing Surface.” They will have just finished the first section in the chapter which covers rocks and minerals. They would now be ready to begin a section called “Weathering and Erosion.” Here students will learn about different types of weathering and how soil is created and maintained. Students will be using print, electronic, and primary sources (interviews of community experts) to determine ways to make our soil more fertile. Since we live in a rural agricultural area, this topic is of interest to most students. Also, because 6<sup>th</sup> grade students have limited experience with formal written reports, the final project will take this form.

Because many of the informational inquiry skills have already been introduced to the 8<sup>th</sup> graders, their project is designed to focus more on science content but allows students to expand their informational inquiry skills as they seek evidence to support the science content. During this unit the students will be studying Chapter 9: Thermal Heat in their textbook (Indiana Science: Grade 8 published by Glencoe Science.) They will be using print, electronic, and primary sources (interviews with and/emails to experts.) to support and expand information learned in this chapter. The final product about “Best

Kitchen Ideas” as related to kitchen counter building materials and equipping a kitchen with appropriate items related to heat may take different forms. After a self-assessment and an individual conference, the final form will be agreed upon by each student and the media specialist. This unit also includes a focus on using Microsoft Word to create a technical step-by-step document (lab report) using section headings and tabs.

Both of these inquiry units will focus on these Indiana Academic Science and Information Literacy Standards (ILS). As identified, some of the standards (minor) will be incorporated at an introductory level while other (major) will be taught and assessed although possibly at a basic level.

## **Unit 1 (6<sup>th</sup> Grade Science): Are Worms Really Yucky?**

### **Major Standards (Taught and Assessed)**

- Science 6.2.7: Locate information in reference books, back issues of newspapers and magazines, CD-ROMS, and computer databases. (Communication skills)
- Science 6.3.15: Explain that although weathered rock is the basic component of soil, the composition and texture of soil and its fertility and resistance to erosion are greatly influenced by plant roots and debris, bacteria, fungi worms, insects, and other organisms. (Earth and the Processes that Shape It)
- Science 6.3.16: Explain that human activities, such as reducing the amount of forest cover, increasing the amount and variety of chemicals released into the atmosphere, and farming intensively, have changed the capacity of the environment to support some life forms. (Earth and the Processes that Shape It)
- LA 6.2.1: Identify the structural features of popular media (newspapers, magazines, online information) and use the features to obtain information.
- LA 6.2.4: Clarify an understanding of texts by creating outlines, notes, diagrams, summaries, or reports.
- LA 6.4.8: Review, evaluate, and revise writing for meaning and clarity.
- LA 6.4.9: Edit and proofread one’s own writing, as well as that of others, using an editing checklist or set of rules, with specific examples of corrections of frequent errors.
- LA 6.4.10: Revise writing to improve the organization and consistency of ideas within and between paragraphs
- LA 6.5.2: Write descriptions, explanations, comparison and contrast papers, and problem and solution essays that state the thesis (position on the topic) or purpose, explain the situation, organize the composition clearly, and offer evidence to support arguments and conclusions.
- LA 6.5.3: Write research reports that pose relevant questions that can be answered in the report by supporting the main idea or ideas with facts, details, examples, and explanations from multiple authoritative sources, such as speakers, newspapers and magazines, reference books, and online information searches and include a bibliography.
- ILS 2: Evaluates information critically and competently.

ILS 3: Uses information accurately and creatively.

**Minor Standards (Introduced)**

- Science 6.3.8: Explain that fresh water, limited in supply and uneven in distribution, is essential for life and also for most industrial processes. Understand that this resource can be depleted or polluted making it unavailable or unsuitable for life. (Earth and the Processes that Shape It)
- Science 6.4.3: Describe some of the great variety of body plans and internal structures animals and plants have that contribute to their being able to make or find food and reproduce. (Diversity of Life)
- Science 6.4.11: Describe that human beings have body systems for obtaining and providing energy, defense, reproduction, and the coordination of body functions. (Human Identity – as worm is compared to human)
- LA 6.1.4: Understand unknown words in informational texts by using word, sentence, and paragraph clues to determine meaning.
- LA 6.2.3: Connect and clarify main ideas by identifying their relationships to multiple sources and related topics.
- LA 6.4.6: Use organizational features of electronic text (on computers), such as bulletin boards, databases, keyword searches, and e-mail addresses, to locate information.
- ILS 1: Accesses information efficiently and effectively.
- ILS 9: Participates effectively in groups to pursue and generate information.

**Unit Outline:** (Except for introductory and wrap-up activities, lessons directed by science teacher will take place in the science room. Those directed by the Library Media Specialist (LMS) will take place in the media center.

	Brief Description of Activities	Teacher Responsible
Day 1	Introduce unit <ul style="list-style-type: none"> <li>• Read picture book “Why Worms?” by Gillian Davies and Robin Kramer</li> <li>• Outline unit components</li> <li>• Complete Anticipation (Reading) Guide for worm related readings</li> </ul>	<ul style="list-style-type: none"> <li>• LMS</li> <li>• Science and LMS</li> <li>• Science</li> </ul>
Day 2	Divide class into two groups (except for the class with the smallest number who will complete activities as a whole class allowing both teachers to see what the other one is doing) Group 1: Complete “Garbage-Eating Worm” Lab <i>[Submitted in next section as detailed lesson]</i> Group 2: Visit identified worm Internet sites. Complete Web cited forms for sites	<ul style="list-style-type: none"> <li>• Science</li> <li>• LMS</li> </ul>

	<ul style="list-style-type: none"> <li>Welcome to Worm Watch (<a href="http://www.naturewatch.ca/english/wormwatch/index.html">http://www.naturewatch.ca/english/wormwatch/index.html</a>)</li> <li>Yucky WormWorld (<a href="http://yucky.kids.discovery.com/noflash/worm/index.html">http://yucky.kids.discovery.com/noflash/worm/index.html</a>)</li> </ul>	
Day 3	Reverse previous day	
Day 4	<p>Divided groups</p> <p>Group 1: Discuss the feasibility of “planting worms” to have more fertile soil. Brainstorm other ways to improve soil conditions. Devise questions to ask “experts.” Continue lesson with section in textbook.</p> <p>Group 2: Self-assess “Works Cited” worksheet. Revisit the two Internet sites to actually gather information about earthworms.</p>	<ul style="list-style-type: none"> <li>Science (LMS will assist as needed.)</li> </ul>
Day 5	Reverse of previous day	
Day 6	<p>Visit and presentation (including soil samples) by high school agricultural teacher and Farm Bureau Representative.</p> <p>Students will record ideas for improving soil quality during presentation and retain for later use.</p>	<ul style="list-style-type: none"> <li>Community experts</li> </ul>
Day 7	<p>Divided groups</p> <p>Group 1: Observe “Garbage-Eating Worms” Lab. Review lab as related to Scientific Method. Continue with section in textbook.</p> <p>Group 2: Use Internet and provided keywords to locate information related to creating richer soil.</p>	<ul style="list-style-type: none"> <li>Science</li> <li>LMS</li> </ul>
Day 8	Reverse of previous day	
Day 9	With guidelines provided, use notes to draft a two paragraph report describing one way to enrich soil and its advantages and disadvantages.	<ul style="list-style-type: none"> <li>Science (LMS will assist as needed.)</li> </ul>
Day 10	<p>Divided groups</p> <p>Group 1: Complete drafts and wrap-up section in textbook.</p> <p>Group 2: Complete “Works Cited” sheets for personal interviews. Discuss Web site evaluation as related to accuracy and relevancy.</p>	<ul style="list-style-type: none"> <li>Science</li> <li>LMS</li> </ul>
Day 11	Reverse of Day 9	
Day 12	Not necessarily immediately following Day 10 In language arts class, students will use editing sheet to	<ul style="list-style-type: none"> <li>Language Arts</li> </ul>

	self-edit the rough draft. (Students will be allowed two days to complete final draft and submit it and their "Works Cited" sheets to science teacher.)  Students will take the section quiz and review the Anticipation Guides to see how their knowledge has increased.	(LMS will assist as needed.)  • Science
Day 13 (Wrap Up)	In each class, students will share ideas for enriching soil and as a group determine the top three ideas with a brief supporting statement. The top three ideas from each class will be sent to the community experts for review.	• Science (LMS will assist as needed.)

## Unit 2 (8<sup>th</sup> Grade Science): Can You Stand the Heat?

### Major Standards (Taught and Assessed)

- Science 8.1.6: Identify the constraints that must be taken into account as a new design is developed, such as gravity and the properties of the materials to be used. (Scientific Inquiry)
- Science 8.2.6: Write clear, step-by-step instructions (procedural summaries) for conducting investigations, operating something, or following a procedure. (Communication)
- Science 8.2.8: Use tables, charts, and graphs in making arguments and claims in, for example, oral and written presentations about lab or fieldwork. (Communication)
- Science 8.3.8 Explain that all matter is made up of atoms\* which are far too small to see directly through an optical microscope. Understand that the atoms of any element\* are similar but are different from atoms of other elements. Further understand that atoms may stick together in well-defined molecules or may be packed together in large arrays. Also understand that different arrangements of atoms into groups comprise all substances. (Matter and Energy)
- Science 8.3.9: Demonstrate, using drawings and models, the movement of atoms in a solid\*, liquid\*, and gaseous\* state. Explain that atoms and molecules are perpetually in motion. (Matter and Energy)
- Science 8.3.10: Explain that increased temperature means that atoms have a greater average energy of motion and that most gases expand when heated. (Matter and Energy)
- Science 8.3.11: Describe how groups of elements can be classified based on similar properties, including highly reactive metals\*, less reactive metals, highly reactive nonmetals\*, less reactive nonmetals, and some almost completely nonreactive gases. (Matter and Energy)
- Science 8.3.12: Explain that no matter how substances within a closed system interact with one another, or how they combine or break apart, the total mass of the system remains the same. Understand that the atomic theory

- explains the conservation of matter: if the number of atoms stays the same no matter how they are rearranged, then their total mass stays the same. (Matter and Energy)
- Science 8.3.13: Explain that energy cannot be created or destroyed but only changed from one form into another. (Matter and Energy)
- Science 8.3.14: Describe how heat\* can be transferred through materials by the collision of atoms, or across space by radiation\*, or if the material is fluid, by convection\* currents that are set up in it that aid the transfer of heat. (Matter and Energy)
- Science 8.3.15: Identify different forms of energy that exist in nature. (Matter and Energy)
- L.A. 8.2.5: Use information from a variety of consumer and public documents to explain a situation or decision and to solve a problem.  
Example: Decide which is the most practical and economical wireless telephone to purchase by reading articles, brochures, Web pages, and other consumer sources, such as *Consumer Reports*.
- LA 8.4.6: Use a computer to create documents by using word-processing skills and publishing programs; develop simple databases and spreadsheets to manage information and prepare reports
- LA8.4.7: Review, evaluate, and revise writing for meaning and clarity.
- LA 8.4.8: Edit and proofread one's own writing, as well as that of others, using an editing checklist or set of rules, with specific examples of corrections of frequent errors.
- LA 8.4.9: Revise writing for word choice; appropriate organization; consistent point of view; and transitions among paragraphs, passages, and ideas.
- LA 8.5.3: Write research reports that define a thesis (a statement of position on the topic); include important ideas, concepts, and direct quotations from significant information sources, including print reference materials and the Internet, and paraphrase and summarize all perspectives on the topic, as appropriate; use a variety of primary and secondary sources and distinguish the nature and value of each; organize and display information on charts, tables, maps, and graphs; and document sources with reference notes and a bibliography.
- LA 8.5.5: Write technical documents that identify the sequence of activities needed to design a system, operate a tool, or explain the bylaws of an organization's constitution or guidelines; include all the factors and variables that need to be considered; and use formatting techniques, including headings and changing the fonts (typeface) to aid comprehension.
- ILS 2: Evaluates information critically and competently.
- ILS 3: Uses information accurately and creatively.

### **Minor Standards (Introduced)**

- Science 8.1.3: Recognize and describe that if more than one variable changes at the same time in an experiment, the outcome of the experiment may not be attributable to any one of the variables. (Scientific Enterprise)

Science 8.1.4: Explain why accurate record keeping, openness, and replication are essential for maintaining an investigator’s credibility with other scientists and society. (Scientific Enterprise)

Science 8.2.5: Use computers to store and retrieve information in topical, alphabetical, numerical, and keyword files and create simple files of students’ own devising. (Manipulation and Observation)

ILS 1: Accesses information efficiently and effectively.

ILS 9: Participates effectively in groups to pursue and generate information.

	<b>Brief Description of Activities</b>	<b>Teacher Responsible</b>
Day 1	Introduce unit <ul style="list-style-type: none"> <li>• Have various visual displays including an oven glove, oven mitt, and other heat resistant items; have volunteer fireman in uniform</li> <li>• Outline unit components</li> <li>• Begin creating “foldable” study organizer for chapter</li> </ul>	<ul style="list-style-type: none"> <li>• Science</li> <li>• Science and LMS</li> <li>• Science</li> </ul>
Day 2	Continue “foldable”. Introduce and discuss major concepts of chapter. (Background information)	• Science
Day 3	Continue discussion of major concepts along with presentations by local home supply company and builder.	• Science (& experts); LMS helps as needed
Day 4	Divide class into two groups (except for the class with the smallest number who will complete activities as a whole class allowing both teachers to see what the other one is doing) Group 1: Continue chapter discussion and introduce “heat transfer” lab. Group 2: Create Excel spreadsheet for collecting lab data.	<ul style="list-style-type: none"> <li>• Science</li> <li>• LMS</li> </ul>
Day 5	Reverse of Day 3.	
Day 6	Group 1: Conduct “heat transfer” experiment; keeping notes on how experiment was conducted. Group 2: Use Internet to research possibilities for designing the “best kitchen.” Collect notes, source list, and evidence that source(s) is/are accurate and valid.	<ul style="list-style-type: none"> <li>• Science</li> <li>• LMS</li> </ul>
Day 7	Reverse of Day 6	
Day 8	Additional research day	• LMS & Science
Day 9	Word process a technical document describing the lab.	• LMS

Day 10	Complete technical document and begin work on two project ideas of the “best Kitchen” as it relates to counters and heat resistant materials. (Works Cited included.) Create brief project proposal including format of final project.	<ul style="list-style-type: none"> <li>• LMS/Science; Family &amp; Consumer Science (F&amp;CS) Teacher available for review of ideas.</li> </ul>
Day 11	Wrap-up and preparation for chapter quiz. While quiz is taking place, LMS will meet individual and discuss brief project proposals.	<ul style="list-style-type: none"> <li>• Science/LMS</li> </ul>
Day 12	These final two days will not immediately follow Day 10 since students will be given out of class time to complete projects. On one day students edit technical document and rough drafts in language arts classes using checklists.	<ul style="list-style-type: none"> <li>• LA teacher with help from LMS</li> </ul>
Day 13	Final projects are presented in LMC in a “fair” format so that they can be evaluated by four teachers: Science – science concepts; F&CS – practical kitchen ideas; LA – grammar and presentation; LMS - Works Cited.	<ul style="list-style-type: none"> <li>• Science, LA, F&amp;CS, and LMS</li> </ul>

### Information Inquiry Model

For several years we have been informally using a research model at the 8<sup>th</sup> grade level that was adapted from the I-Search method based on the books I-Search, You Search, We All Learn to Research by Donna Duncan and Laura Lockhart and Making the Writing and Research Connection with the I-Search Process by Marilyn Z. Joyce and Julie I. Tallman. However, after reviewing all of the other models and completing required and supplemental readings for the IUPUI course entitled Information Inquiry for Teachers, I have modified and formalized this plan. Now my goal is to share this with all teachers in our middle school so that we can work more efficiently to teach students information literacy skills. The steps of our modified plan are as follows:

1. What do I want to know? (Introduction)
  - I already know ....
  - I know this because ....
  - I still want to know/understand .... (big {essential} question)
  - To know this, I need to know/understand.... (little questions)
2. What resources and information have I found?
  - I will look for information from more than one source including....
  - I will evaluate the information based on ...
  - I will record and organize what I found using ....
3. How will I share this information?
  - The answer to my big question is ...
  - To understand this big question I need to explain/include ...
  - To share this information with my audience, I will create ....
4. How did this project change me?

- I have changed the way I think or feel about ....
  - This best part of my project is ....
  - If I did this project over, I would ....
5. Which resources did I use? (Works Cited)

Beginning in the 6<sup>th</sup> grade, students would be taught the steps of the search process so that they would understand the terms such as essential question, little questions, evaluate, audience, Works Cited. By the 8<sup>th</sup> grade, more emphasis would be placed on sections 2 and sections 4. See Appendix Sheet for related student worksheet (pages 31-32).

Having a common research model for all three grade levels will have its advantages and disadvantages. First, implementing one model encourages consistency among the teachers as they work with students. Since I, the media specialist, am involved either cooperatively or collaboratively in most of the research projects requiring information literacy, this also adds consistency. However, our weekly schedule allows little time for teacher co-planning and/or professional development. We plan to address this challenge by requesting teacher resource during the first year in which teachers' classes are covered for one or two periods allowing us time to learn about the research model. Helping teachers understand and practice with the research model creates a challenge. Another advantage in using a shared research model is that information literacy skills can be introduced and expanded in sequential order as needed. Again, the difficulty lies in ensuring that teachers in each grade level are aware of what students have done in previous projects. We plan to address this issue by maintaining a student sample portfolio representative of all major projects with emphasis on information literacy and the use of technology. This portfolio will be shared with teachers at the next level during a regularly scheduled team meeting within the first month of school. As is suggested in the book Failure Is Not an Option by Alan M. Blankstein which is guiding our school philosophy, we do not plan to accomplish the goal of adopting a common research model all in one year. Instead, we will focus on small objectives to that by the end of the third year we will have a fully cooperative and implemented model.

While all steps of the research model step are incorporated into both of these information learning units, the focus will be on step #2: What resources and information do I need? Students need continual practice with note-taking, especially as it relates to plagiarism. As stated in the book A Handbook for Classroom Instruction that Works by Robert J. Marzano (et al), "There is no one correct way to take notes. In fact, different students will prefer different note-taking formats, so it's a good idea to present a variety of methods." In my experiences, I have also found that goals or objectives of the project often affect the note-taking format. Before collecting the information from a source, students need to evaluate that source. In the early stages of information literacy, this needs to be done using a formal method. As students gain more experience, "eyeballing" or scanning a source usually provides enough proof that it is a valid source worth using.

Step #2 of our adapted I-Search model corresponds to the Big 6 steps 2 (Information Seeking) and 3 (Location & Access). When comparing the basic description of our mode's step 2 to the Big 6, the idea of evaluating a source is specifically listed. This same task is also identified in step 2 of the Big6. On the Big6

home page, the subtopic 2.2 states, "Select the best sources." On a site entitled *Online Resources to Support the Big6 Information Skills*, subtopic 2.2 is worded as follows: "Evaluate the different possible sources to determine priorities." As I continue to compare the Big6 to the model we are using, I am still attracted to the organization of our model. It allows for reflection, an area that is not obvious in the Big6 process.

In the unit "Are Worms Really Yucky?", the lesson will focus on collecting Works Cited information from two identified Web sites and discussing it as it relates to authority, accuracy, and relevancy. This lesson emphasizes the following standards.

Science 6.2.7: Locate information in reference books, back issues of newspapers and magazines, CD-ROMS, and computer databases.

LA 6.5.3: Write research reports that pose relevant questions that can be answered in the report by supporting the main idea or ideas with facts, details, examples, and explanations from multiple authoritative sources, such as speakers, newspapers and magazines, reference books, and online information searches and include a bibliography.

ILS 2: Evaluates information critically and competently.

In the 8<sup>th</sup> grade unit, "Can You Stand the Heat?," students will select their "best" source of information whether print or electronic and evaluate it in regard to their AACORD sheet (see appendix pages 31-32) which refers to **a**uthority, **a**ccuracy, **c**urrency, **o**bjectivity, **r**elevancy, and **d**esign. This lesson focuses on the following standards.

LA 8.5.3: Write research reports that define a thesis (a statement of position on the topic); include important ideas, concepts, and direct quotations from significant information sources, including print reference materials and the Internet, and paraphrase and summarize all perspectives on the topic, as appropriate; use a variety of primary and secondary sources and distinguish the nature and value of each; organize and display information on charts, tables, maps, and graphs; and document sources with reference notes and a bibliography.

ILS 2: Evaluates information critically and competently.

### **Student Performance**

Both of the lessons are related to collecting information. However, emphasis will be placed on first evaluating the source of information since a source deemed as unacceptable or not credible for whatever reasons should not be used for collecting information. Students will actually collect the information later in the unit. As students complete the lesson activities, the 6<sup>th</sup> graders will be able to do the following as related to Web sites:

1. Identify the authority including author and/or sponsoring group.
2. Provide proof of accuracy by identifying one or more of the one of the following:
  - is common knowledge

- can be found in another reputable source
  - accepted because of “expert” authority
3. Recognize relevancy as related to the subject/topic being researched.
  4. Record information needed to complete an MLA style “Works Cited” entry for the source.

In the 8<sup>th</sup> grade lesson, the above objectives would also be measured. However, these objectives may be related to either print or electronic sources. Also, the following objectives would be added:

5. Determine the currency of the source.
6. Identify any objectivity or bias related to the source.
7. Identify any design or navigational concerns that make the source difficult to use.

Although I do not have actual samples from this lesson, in the appendix (see pages 39-43) I have included a student sample of a social studies / language arts collaboration that will be taught before the science unit. Also provided is a student example of a Holocaust project completed later in the year in which students are required to cite an online image. Having results from both of these projects as well as the science unit will allow the teachers and me to measure students’ growth.

## Teaching Materials

### 6<sup>th</sup> Grade Unit: Are Worms Really Yucky?

- Introduction to lesson: Day 2 of unit - The class will be divided into two groups. Special needs students will remain grouped (approximately 2-3 per class) so that the teachers can adapt instructions and provide assistance more easily. One group will remain in the science class room. The other group will report to the LMC to work with the media specialist. The two groups will switch tasks the next day. (As noted previously, the smallest group will remain intact so that both the science teacher and the LMS can see what is being covered in each activity. For this lesson, the LMS will serve as lead teacher with assistance from the science teacher as she circulates among the students to assist them.) This lesson will address information literacy skills related to evaluating Web sites based on authority, accuracy, and relevancy. Students will be collecting information to complete MLA Works Cited Sheets.
- Objectives: Locate the authority and other publishing information for a Web site needed for MLA style citations.  
Use an MLA style guide to complete a Web site citation.  
Explain how authority supports the validity of a Web site.
- Materials: Bookmarked Web access to the following sites:

- Welcome to Worm Watch  
(<http://www.naturewatch.ca/english/wormwatch/index.html>)
  - Yucky WormWorld  
(<http://yucky.kids.discovery.com/noflash/worm/index.html>)
- 1 computer per student (2 can share, if necessary)  
 2 “General Internet Site” worksheets per student (these can be printed on front and back if desired – see appendix page 35)  
 LCD project and teacher presentation station, if available  
 pen or pencil

Procedure: (Lesson directed by the media specialist)

- 2 minutes: As students enter the LMC, instruct students to select a computer, log on, and open the Microsoft Explorer to use the Internet.
- 5 minutes: Have students turn away from the computer to face the instructor. Discuss the following review questions (since students have been previously introduced to these concepts in other projects).
  - What do we mean when we talk about the authority of a Web page? (This is the person and/or group that is responsible for the information listed.)
  - Why is it important to determine the authority? (This helps us decide if we should use the information for our report.)
  - Why should we list our sources in an organized form such as the MLA style? (Other can see where we got our information so they can use the same sources; helps prove the validity of our information, allows the teacher to see if we plagiarized.)
- The following two sites will be bookmarked or made easily accessible from the LMC Web site. (If students have to type the url into the address bar, it lengthens the time of the lesson.)
- Tell student to click the first site: Welcome to Worm Watch  
(<http://www.naturewatch.ca/english/wormwatch/index.html>)
- Have students click the button “Virtual Worm” located in the menu at the left of the site.
- Pass out the two “General Internet Site” worksheets.
- Display this site on the LCD projector, if possible, so that the following points can be visually emphasized.
- 5 minutes: Ask students to search for the author. Remind them to look at the top and bottom of the page and ask the following questions.
  - Did they find one? (no)
  - What did they find? (the publishing group called *Worm Watch Canada* is listed at the bottom of the page next to the copyright date.)
  - Who makes up the group *Worm Watch Canada*? (We don’t know exactly, but if we go back to the main page, we will find out that it is recommended by several science groups including SciLinks by the National Science Teachers’ Association.) **Return to the Virtual Worm.**

- Point out the *en français* link located near the top left and ask why is there a French version of the Web site offered? (French is one of the languages of Canada and it is spoken in several areas – this is a connection to what the students are discussing in social studies class.)
  - What do we do if we don't find a specific author? (Leave this blank empty.)
  - 2 minutes: Ask students to identify the title of this page and to record it on their worksheet. (Virtual Worm Tour).
  - 1 minute: Ask them why there are boxes in front of and behind the title of the page. (This is for the punctuation: quotes and a period.)
  - 1 minute: Ask students to identify the title of the site. (Based on the sections listed at the top, we would call this Worm Watch.)
  - 2 minutes: Ask them to record this information in the appropriate sections.
  - 1 minute: Instruct students to draw a wavy line under the Web site title and ask why. (This represents italics so if I type, I know to italicize this information.)
  - 2 minutes: Ask the student to look for a date of publication, listing or posting, modification, etc. What do they see? (The copyright year is the only date available.)
  - 2 minutes: Ask them to record 2002 in the blank for the year. (Point out that the box at the end reminds them to add a period.)
  - 2 minutes: Ask the students who the publishing group is and to record it properly. (Nature Watch Canada.)
  - 2 minutes: Ask students what was the date of the last time they looked at this site and it was working. (This would be today's date.)
  - 2 minutes: Tell students to record the date. Remind them to follow the appropriate format as listed on the sheet.
  - 2 minutes: Ask students to locate the url and to record it using angle brackets < >. Remind them that if we were typing this Works Cited, we would use copy and paste since many of us make mistakes in writing down urls.
  - Instruct students to go back to the original bookmarked sites and to click on the second site.
  - 15 minutes: Have students collect the Works Cited information for Yucky WormWorld. (<http://yucky.kids.discovery.com/noflash/worm/index.html>)
- Circle around the room assist students as needed.**

Wrap Up: 2 minutes: Ask the students the following questions:  
 Should we use these sites to get the information about earthworms? (Yes)  
 Why? (trustworthy authority and relevant to our topic)

Assignment: The students should complete the bottom portion of the worksheet for both Web sites. This section requires them to rewrite the information

including all punctuation. (Self-assessment sheet will be used on the next day allowing students to check their work – see appendix page 36.)

## 8<sup>th</sup> Grade Unit: Can You Stand the Heat?

**Introduction to lesson:** Day 2 of unit - The class will be divided into two groups. Special needs students will remain grouped (approximately 2-3 per class) so that the teachers can adapt instructions and provide assistance more easily. One group will remain in the science class room. The other group will report to the LMC to work with the media specialist. The two groups will switch tasks the next day. (As noted previously, the smallest group will remain intact so that both the science teacher and the LMS can see what is being covered in each activity. For this lesson, the LMS will serve as lead teacher with assistance from the science teacher as he circulates among the students to assist them.)

Students will have identified their “best” site to help them with their research about creating the most efficient kitchen possible (as related to the transfer of heat). They are trying to find out the best counters, counter protectors, and kitchen aids such as oven mitts. During this lesson students will be using a worksheet referred to a AACORD to prove their site is valid based on six areas of evaluation: authority, accuracy, currency, objectivity, relevancy, and design. Students will also be collecting information to complete MLA Works Cited Sheets.

**Objectives:** Prove that the Web site selected is valid.  
Collect information needed for MLA Works Cited citation.

**Materials:** 1 AACORD sheet per student (see appendix pages 31-32)  
1 General Internet Site (Works Cited – see appendix page 35)  
1 computer per student  
pen or pencil

**Procedure:** (Lesson directed by LMS in the media center.)

- 2 minutes: As students enter the LMC, instruct students to select a computer, log on, and open the Microsoft Explorer to use the Internet.
- 5 minutes: Ask students these review questions.
  - What are the 6 areas we use to evaluate a Web site? (authority, accuracy, currency, objectivity, relevancy, and design)
  - What do we mean by authority? (This is the individual or group who is responsible for the information. Often there is not an author but there is usually a publishing group.)
  - How can we prove accuracy? (Accept the authority as an expert or compare the same information to a different source.)

- Why is it important for a Web site to be current? (Information is constantly changing; also, even with topics such as Robert E. Lee, it is important for the site to be maintained so that links work.)
- What do we mean by objectivity or bias? (This is where the author may express his/her own ideas, point-of-view, personal preferences, or products intermixed with facts or other information. Internet users must be especially careful when researching controversial topics such as abortion, gun control, the war in Iraq. They must remember to always get both sides of the argument. )
- In this research about project about heat in kitchens, what kind of objectivity do we need to be aware of? (Product vendors may have sites acclaiming their own products, but not offer comparison to other similar products.)
- How do we know the information is relevant? (It answers the questions we have. Usually it provides additional information to help us better understand my topic.)
- Why is it important to consider the design of the site? (Some sites are too difficult to read – cluttered, etc. Others are difficult to navigate through to find the information.)
- What is the most important area to evaluate? (Authority is extremely important; however, if the information is out-of-date, biased, or too difficult to read, we probably won't use the site. This idea makes all of the areas important.)
- 5 minutes: Pass out the Web Site Evaluation form and the Works Cited collection form while students are returning to the site they located on the previous day. Ask them, "How did you get back to your site?" After a couple of answers are presented, ask them "Would it have been easier if you had the url? [This reminds students why Works Cited sheets are helpful.]
- 25 minutes: Allow students to complete the two worksheets. Circulate and answer questions as needed. Remind students to paste the url into a Microsoft Word document.

**Wrap Up:** Make the following assignments – due in 2 days in L.A. class.

- 1) Complete the paragraph about on the Web Evaluation sheet. Make sure you include 3 specific pieces of support.
- 2) Type the Works Cited citation in correct MLA style.

(Students will use a self-assessment to check and to edit their assignments before turning them in – see appendix page 37.)

### **Learning Materials**

- 1) I-Search Planning Guide – This sheet guides students through the entire process. Parts of it will be filled out together while other sections are completed entirely by the students. Some parts will be filled out

before the process others during the process, and a few at the end of the process. Although the basic guide remains the same, the information is modified to meet the specific needs of each research assignment. (See appendix page 29.)

- 2) AACORD Web Evaluation – This worksheet is used periodically throughout the year. Sometime during grades 6-8, each section is introduced and practiced as mini-lessons related to particular projects. By the end of the 1<sup>st</sup> trimester, 8<sup>th</sup> graders are expected to be able to complete the entire sheet and to build evidence of validity into their projects. (See appendix pages 31-32.)
- 3) Web Evaluation – This is a tool used to assign a grade to a final “Web Evaluation” section of a product. It is based on 50 points, and students have the opportunity to make corrections and improve their scores. (See appendix page 33.)
- 4) Web Evaluation (Modified Activity) – This is a shortened form of the Web Evaluation assignment. It is used with special needs students or when the lesson objective is just to focus on proof or support of validity. (See appendix page 34.)
- 5) General Internet Site – This is an example of the step-by-step Works Cited Collection information collection sheet that is used to introduce the skill of creating a Works Cited or bibliography. I have created a similar sheet for the different sources of information. (See appendix page 35.)
- 6) Works Cited Self-Assessment – In the early stages of learning to create a “Works Cited,” students would use this sheet to ensure that they are using the correct format, punctuation, and information. This sheet has two levels. One is used with 6<sup>th</sup> graders as the self-assess an individual Work Cited Collection Sheet. The other format is used with 7<sup>th</sup> and 8<sup>th</sup> graders to self-assess their complete Works Cited since they are expected to type the final product. (See appendix pages 36-37.)
- 7) Work Cited Score Sheet – This sheet is used to assign a final grade to a Works Cited document. It is given to students as they begin compiling their information since it can also serve as a self-evaluation. (See appendix page 38.)

### **Feedback and Evaluation:**

The success of the lessons taught will be reflected in the final product of a Works Cited. For the 6<sup>th</sup> graders, this will be in the form of evaluating the Works Cited sheets. The grading of these sheets will be lenient since they are still working at an introductory level. However, since will be introducing the skill of collecting citation information at a much earlier level, by the time the students are in the 8<sup>th</sup> grade, basic information literacy skills will only be need to review and continuing lessons can expanded and more in-depth.

The 8<sup>th</sup> graders final product for this lesson will be a formal (typed) Works Cited and a five paragraph language arts essay supporting the validity of their “best” site.

Since all the 8<sup>th</sup> graders will have a study hall during the time we complete this unit, I will be able to meet with them on an individual basis. During these conferences, we will compare their self-assessment Works Cited sheet with their actual Works Cited to see if they just answered “yes” to all questions without actually evaluating their work. This seems to be a common trait among 8<sup>th</sup> graders; however, I have found that the students have never actually been taught to use checklists and rubrics to improve their work. They have just been given the tool and told to use it. This conference will allow us to discuss the work and then I will give the student an additional two days to correct what is missing.

These collaborative units will be continuously informally evaluated throughout the process. On days that we are working together, the collaborating teacher and I will discuss minor changes that we need to make before the next class period. We will meet for a short time during the teacher’s prep time or after school to discuss major revisions, especially in the time schedule. We will also assess how well our special needs students are doing and decide if they need more assistance or support. If necessary, we will modify or eliminate selected sections of the unit. At the end of the unit, we will do a formal evaluation including making suggestions for next time. I have learned from experience. If we do not record these changes at this time, we will forget what we need to do when it is actually time to repeat the unit and we will make the same mistakes. I will use samples such as the “Collaborative Planning Sheet” available on the Indiana Learns Web site sponsored by the Indiana Department of Education to create a formal collaboration evaluation sheet.

The best evidence of success is when students begin using these skills without being required to. We already use the Web evaluation at a basic level in another class so we have been teaching students how to evaluate Web sites. It is quite rewarding to hear one student say to another “Maybe you should use a different site since that one was written by a 7<sup>th</sup> grader” while doing a quick health project this year. The proof of success of our information literacy units will be when other teachers notice the students using the skills. This evidence will be collected in end-of-the year surveys and reflections that are required by our three year technology plan.

I shared the modified I-Search steps with the 8<sup>th</sup> grade teacher with whom I often work collaboratively. Here was her responding email.

To: Karen  
From: Karla  
Date: 4/22/06

I looked over the modified I-Search plan you sent me. Here are my comments:

Students did a much better job with the big question this year. The way you changed your teaching of this idea really helped.

I like the statement in section two about students looking for information in more than one source. We still need to figure out how to get them to use print sources and not just rely on the Internet.

In section 3 – can we find some way to word the statement so that students need to fully answer their big question? Most of them just settle on the easiest answer. Maybe we can ask for more than one possible answer. Let's think about this.

Section 4 – The way you reworded this section emphasizes that student need to provide feedback about the project. I think this will help us avoid the problem of the students trying to simply re-answer their big question.

Section 5 – This section gets easier and easier as you keep breaking down instruction. I hope we can get more teachers involved in starting this at the 6<sup>th</sup> grade level.

When we get together in the fall to plan our American Revolution unit, I think these changes will help our final results. We may still need to work on some of the specific wording.

I shared the basic idea of the “worm” unit with the 6<sup>th</sup> grade science teacher. She was enthusiastic, but cautious. She was concerned about the amount of time the unit would take. What did appeal to her was the idea that the class could be divided making her lab work easier. However, since she is not familiar with any of our current information literacy projects, she said she would like to wait until next year to discuss it since we will be doing teacher in-service to share what types of literacy skills and technology we are using at the different grade levels. Because I have been consumed by these units, I was attempting to describe “worm” idea to my aide one afternoon when the health teacher walked in during her prep period. She became excited since this unit relates to her 6<sup>th</sup> grade environmental standards of composting and water pollution related to contamination by fertilizer. Since she has the 6<sup>th</sup> grade students during the same trimester that the science classes would be completing this unit, she said that she would be willing to allot some of her class time. As a result, this idea may grow into a three-person collaboration.

## **Field Test**

Many of the activities in these units have been field tested in other projects with which I have been involved over the last six years, Most of these activities have been adapted and modified so that they are much more successful than they were at first. For example, when I first began doing “Works Cited,” it was introduced at the 8<sup>th</sup> grade level and I only used an MLA Style Guide based on the site hosted by the Purdue Online Writing Lab. In a simplified format, I listed what information needed to be collected and showed an example. All of the different types of sources were listed in the same guide. A sample of a completed Works Cited was attached. Regardless of the amount of instructional time, our students seemed to find this guide overwhelming. As I discussed this topic with other media specialists, a few suggested that students did not need to be taught much about creating Works Cited since tools such as *Citation Machine* were available. However, when I tested *Citation Machine* with students, I discovered that they still had to be taught what information to collect and where this information could be found in a source.

Since student continued to have difficulty finding the needed to use *Citation Machine* and the traditional style guide seemed to be overwhelming, I created the individual sheets that I refer to as “Step-by-Step.” Only the information needed and an example of two is listed on the sheet for one type of source. Students then have sections in which to record the corresponding information from their source. I found that students still seemed to be having trouble with the punctuation. For that reason, I created the “Step-by-Step” sheets with empty boxes (see appendix page 35) identifying where punctuation should be placed. After much practice early in the year, we do not require students to fill out the “Step-by-Step” sheets. They need only use the MLA Style Guide to type their Works Cited. However, most of the lower ability students request the “Step-by-Step” sheet, and they have been extremely successful in creating accurate Works Cited pages. Late in the 8<sup>th</sup> grade year, we show the students *Citation Machine* and allow them to use it. We have received feedback from the high school that the students do well with Works Cited. This is important since they are not taught how to do a Works Cited there; they are just directed to an MLA style guide and expected to create them.

We have also used the I-Search Planning Guide (see appendix page 29) in other activities. However, it has now been modified to include more freedom in the area of creating a product. Usually, we just tell students what the format will be. In some activities we will still do this; however, we plan to offer students more choices when possible.

## Resources and References

ASCD. “Less Teaching, More Assessing: Teacher Feedback is Key to Student Performance.” *Education Update*. Feb 2006: 1 – 8.

This article provides a description of how types of assessment can be used to provide individual teacher feedback thus reducing the amount of teaching, but improving the quality of learning. It also includes suggestions and guidelines for conducting student conferences.

Chappuis, Jan. “Helping Students Understand Assessment.” *Educational Leadership*. Nov 2005: 39 – 43.

As pointed out in this article, many students do not know how to properly use and fully benefit from assessment, especially self-assessment. This article provides teachers methods of demonstrating the value of assessments to children.

“Collaborative Planning Sheet 1, P. 33.” [Indiana Learns: Collaborative Planning](http://www.indianalearns.org/collaborativeplanning.asp). Indiana Department of Education: Office of Learning Resources. 25 Feb 2006.  
<http://www.indianalearns.org/collaborativeplanning.asp>.

As a part of a Web site based on the book *Indiana Learns* by David Loertscher with Connie Champlain, this example of a collaborative planning sheet is one page in an entire section related to collaboration between teachers and the

media specialist. The entire site provides access to worthwhile resources including a wide range of Web-based resources.

Duncan, Donna and Lockhart, Laura. I-Search, You Search, We All Learn to Research. New York: Neal-Schuman Publishers, Inc.; 2000.

This is a how-to-do-it manual for teaching elementary school students to solve information problems. It breaks down each section of the I-Search process, explaining it in detail.

“Indiana’s Academic Standards.” 2006. Indiana Department of Education. 9 Feb 2006. <http://www.doe.state.in.us/standards/welcome.html>.

This Web-site provides access to all of the Indiana Academic Standards in both Microsoft Word and pdf formats. The resource section provides links to related lessons including Curricular Framework Classroom Activities and Marcopolo Lesson Plan Units. For some of the standard indicators, classroom assessments are provided.

The Iowa City Community School District (Langhorne, Mary Jo, ed.). Developing an Information Literacy Program K-12. New York: Neal-Schuman Publishers, Inc., 1998.

Part I of this manual outlines the development of the information literacy program at all grade levels. Part II contains model lessons for working within the elementary program. However, these lessons can be adapted for middle school level. In chapter 3, “Key Literacy Concepts in Junior High/Middle School” provides a basic idea of which literacy skills should be included in developing a program.

Joyce, Marilyn Z. and Tallman, Julie I. Making the Writing and Research Connection with the I-Search Process. New York: Neal-Schuman Publishers, Inc.; 1997.

This how-to-do-it manual for librarians describes the I-Search approach to research. It outlines the process and provides helpful I-Search management strategies.

Loertscher, David with Champlain, Connie. Reinventing Indiana’s School Library Media Programs in the Age of Technology: A Handbook for Principals and Superintendents. San Jose: High Willow Publishing, 2001.

Written as a companion Indiana Learns, this book is designed for the busy administrator; however, it is helpful to the busy media special, too. This slim volume provides one-page ideas for rethinking the library media center program.

Marzano, Robert J. (et al). *A Handbook for Classroom Instruction that Works.*  
Alexandria, VA: Association for Supervision and Curriculum Development; 2001.

This handbook outlines nine categories of instructional strategies proven to improve student achievement. Although all sections are valuable, the topic of summarizing and note-taking is extremely valuable as it relates to information literacy.

Online Resources to Support Big6 Information Skills. Updated May 2005. Wentachee School District. 22 Apr 2006. [http://nb.wsd.wednet.edu/big6/big6\\_resources.htm](http://nb.wsd.wednet.edu/big6/big6_resources.htm).

This site contains a list of resources designed and organized using the Big6 steps. However, its resources will support any research model.

“Using Modern Language Association (MLA) Format.” *OWL: Online Writing Lab.*  
Revised 2003. Purdue Online Writing Lab and Purdue University. 23 Apr 2006.  
[http://owl.english.purdue.edu/handouts/research/r\\_mla.html](http://owl.english.purdue.edu/handouts/research/r_mla.html).

This online MLA style guide provides details and examples of how to make bibliographic citations using the MLA style. Although its design makes it difficult to read and navigate at a quick glance, this site provides the necessary information. For middle school students to use this site, they would need an introduction and initial guidance.

*Worm Watch.* 2002. Worm Watch Canada. 23 Apr 2006.  
<http://www.naturewatch.ca/english/wormwatch/index.html>.

This Web site provides students information about the earthworm including its environmental value as well as its anatomy. While the site is helpful, it is not completely finished.

*Worm World: The Yuckiest Site on the Internet.* 2002. Discovery Communications Inc. 23 Apr 2006. <http://yucky.kids.discovery.com/noflash/worm/index.html>.

In a format interesting to students, this Web site provides information about earthworms and their assistance in improving the quality of soil.

Warlick, David. *Citation Machine.* 2002. The Landmark Project. 23 Apr 2006.  
<http://citationmachine-east.net/>.

Citation Machine is an online tool that assists the user in creating citations in both the MLA and APA styles. In order for students to use it successfully, they must know how to cut and paste information and also how to set hanging indents in a word processing program.

## Unit Comparison

As I have illustrated earlier in this project, especially in the “Field Test” section, students information literacy skills should be introduced, developed, and expanded in a planned sequential order. I have been fortunate to have the opportunity to be involved with extensive collaboration at the 8<sup>th</sup> grade in many subject areas including language arts, social studies in health. *Unfortunately*, for various reasons, I have not had the same opportunity in the other two grade levels. Nor have I been involved with a science unit. However, our faculty is working together to remedy this deficiency. That is why these two units were selected.

Most teachers feel comfortable with introducing a task, collecting and organizing information, and helping students create a project. They are less comfortable with the concept of evaluating sources, using self-assessments, and requesting students to reflect on their work. By completing an information literacy unit in the 6<sup>th</sup> grade, the teacher(s) and I can begin to introduce these important skills.

I have discovered in previous projects that at the start of the year, we must provide a great deal of scaffolding at all areas of a project. However, as students learn and practice these skills, much of this scaffolding can be eliminated or shortened encouraging final student projects to be more individual and diversified. These two units are designed to demonstrate this growth.

First, comparing the two levels of “Works Cited” self-assessment checklists (see appendix pages 36-37) draws attention to the fact that 8<sup>th</sup> graders no longer need to assess every little point. By the middle of their 8<sup>th</sup> grade year, they know what information should be included in the Works Cited and the format in which it should be presented. Furthermore, while Web site evaluation can be introduced at or before the 6<sup>th</sup> grade level, these students (especially ours since they are exposed to very few information literacy skills at the elementary level) need to focus on what I have determined to be the most important areas of authority, accuracy, and relevancy. While currency might seem to be easy for students to comprehend, evaluating this area also proves to be difficult. Students must judge whether the topic is changing or new information has been discovered. Also, they have difficulty with the concept that a site must be maintained. Surprisingly, another area which provides difficulty is design. Since most of the students have no Web design experience, they have difficulty determining whether the site is professional or not. I have found that they need to be taught a tremendous amount of Web-related vocabulary. That is why the Web Evaluation sheet (see appendix page 31) has keywords listed. I plan to modify this sheet to provide scaffolding for the 6<sup>th</sup> graders as they begin Web evaluation. Finally, other than the idea of trying to sell something, 6<sup>th</sup> graders just cannot comprehend the concept of objectivity, prejudice, or bias being mingled with facts. At the 6<sup>th</sup> grade level, students accept almost everything they are told as “the gospel truth.” For this reason, although we might refer objectivity at an introductory level, we do not incorporate it lessons until the 8<sup>th</sup> grade.

Another area of these units which differ because of levels in understanding is information in sources. At the 6<sup>th</sup> grade level, our students are novices in using the Internet. Only a few can name another search engine or tool besides Google, and most of them cannot even spell Google correctly. For this reason, we provide the Internet sites or the keywords that students need to use. However, throughout the year,

additional lessons allow us to expand our students' skills in seeking information and to allow them more freedom. By the 8<sup>th</sup> grade year, as is illustrated in this unit, students search for their own information, but seek assistance as needed.

Information literacy skills have always been important. However, Internet allows us to access information from almost anywhere compiled by anyone and everyone. Since students have access to such tremendous amounts of information, much from unreliable sources, teaching information literacy has taken on a new depth and a new urgency. At our school, we are scrambling to meet these needs as well as prepare our students for their standardized tests.

Name: \_\_\_\_\_

Period: \_\_\_\_\_ Date: \_\_\_\_\_

## I-Search Planning Guide: How to Improve Soil Conditions without Planting Worms



### 1. What do I Want to Know?

✂ I already know

\_\_\_\_\_

✂ I really want to know (The BIG Question!)

\_\_\_\_\_

✂ I want to know this because

\_\_\_\_\_

✂ To understand my big question, I need to know ... (List 3-5 little questions.)

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_



### 2. What resources will I use and what notes do I need?

✂ For information I will search

\_\_\_\_\_

✂ I will collect notes using

\_\_\_\_\_

✂ I will use these keywords to search:

\_\_\_\_\_

✂ I had problems finding information because

\_\_\_\_\_

✂ I had success in finding information because

\_\_\_\_\_

✂ I found valuable information in these places

\_\_\_\_\_

✂ I know I can use this information because \_\_\_\_\_



3. **What did I learn and how will I share this information:** (List 3 - 5 key points or answers to your littler questions you're your readers will have to know in order to understand your topic and your answer to the BIG Question)

✂ Who is my audience for this project? \_\_\_\_\_

✂ What kind of project will help my audience best understand my information?  
\_\_\_\_\_  
\_\_\_\_\_

✂ Answer to Big Question: \_\_\_\_\_

✂ Answers to little questions or 3-5 supporting details\_

✂ \_\_\_\_\_  
\_\_\_\_\_

✂ \_\_\_\_\_  
\_\_\_\_\_

✂ \_\_\_\_\_  
\_\_\_\_\_

✂ \_\_\_\_\_  
\_\_\_\_\_



4. **How did this project change me?:** List 3 ways this research process and/or the new knowledge you have about this topic have changed the way you think, feel, or believe.

✂ This project has caused me to change the way I feel about  
\_\_\_\_\_ because  
\_\_\_\_\_

✂ The best part of my project is  
\_\_\_\_\_

✂ If I did this project over, I would  
\_\_\_\_\_



5. **References: Works Cited** – You will turn in Works Cited sheets for the three sources, the two Internet sites we used in class and the site you used to get your information about the best way to improve soil. You will also turn in your self-assessment checklists.

Name: \_\_\_\_\_

Period: \_\_\_\_\_

Date: \_\_\_\_\_

## AACORD Web Evaluation



Title of Web article:  
\_\_\_\_\_

In the Search Process section of your I-Search paper, you must tell which Web site was your best source of information and why. This Web Evaluation form helps you collect the necessary evidence to support your opinion. You may not be able to fill in every blank, but you need to collect enough **specific details** to support your answer. When you include these results in Section 2 of your I-Search paper, you must give support from at least 3 AACORD categories (including authority) to prove that your site is valid and trustworthy.

	Great	Good	So-So	Poor
1. <b>*Authority:</b> (Is the author/group knowledgeable in this subject?)	4	3	2	1

What group publishes this site? \_\_\_\_\_

If listed, who is the author of this article? \_\_\_\_\_

What are his/her credentials that make him/her qualified? \_\_\_\_\_

What other credible groups recognize or support this site? \_\_\_\_\_

(In other words, who else recommends or links to them?)

**Key terms:** valid, credible, trustworthy, recommend, qualified, references, credentials

	Great	Good	So-So	Poor
2. <b>Accuracy:</b> (Is the information reliable?)	4	3	2	1

What is one verifiable fact you can check? \_\_\_\_\_

Where else did you check this fact? \_\_\_\_\_

Are sources listed telling where the author found the information? yes no

If so, where? \_\_\_\_\_

Does the information seem believable and accurate? yes no

Why? \_\_\_\_\_

Is the information well-written and without spelling and grammar errors? yes no

**Key terms:** sources

	Great	Good	So-So	Poor
3. <b>Currency:</b> (Is the information current?)	4	3	2	1

What is the most recent update or copyright listed? \_\_\_\_\_

Is the information kept up-to-date? yes no  
How do you know? \_\_\_\_\_

Are the links up-to-date and working? yes no

Is it important for this information to be updated frequently? yes no

Why or why not?

**Key terms:** updated, published, listed, modified, copyright, links, maintenance (maintained)

	Great	Good	So-So	Poor
<b>4. Objectivity:</b> (Does this information present all views?)	4	3	2	1
Is this info about a controversial topic?	yes	no		
Does it try to convince you to do or believe something?	yes	no		
If so, what?	_____			
Do the links provide a variety of viewpoints (pro & con)?	yes	no		
Does the author (person or group) have any reason to give you incomplete or wrong information?	yes	no		
Why or why not?	_____			
Does the site try to give all sides and viewpoints?	yes	no		
Is the main purpose to sell something?	yes	no		
If so, what?	_____			
Why might this affect how you look at the site?	_____			

**Key terms:** biased, viewpoint, commercial

	Great	Good	So-So	Poor
<b>5. Relevancy:</b> (Does the site provide enough information about your topic?)	4	3	2	1
Is the site strongly or just slightly related to your topic?	strongly		slightly	
Does the site answer your specific questions?	yes		no	
Does the site provide <i>extra information</i> that helps you better understand your topic or question?	yes		no	
Can you easily understand the information in this article?	yes		no	

**Key terms:** useful information, necessary information

	Great	Good	So-So	Poor
<b>6. Design:</b> (Is it easy to find information at this site?)	4	3	2	1
Does the site have a menu, index, site search, or site map?		yes	no	
Can you find your information easily? (layout, menu, headings)		yes	no	
Why?	_____			
Is the information easy to read? (font type & size, background)		yes	no	
Why?	_____			
Do the graphics (lines, boxes, pictures, etc.) enhance the site?		yes	no	
How?	_____			
Does the site take too long to load?		yes	no	

**Key terms:** navigation (menu, link, site map, site search, page length); layout (columns, section headings, background, organization, graphics - lines & boxes, etc.); font (color, style, size)

	Great	Good	So-So	Poor
<b>✧ Overall Evaluation:</b>	4	3	2	1
What is your overall opinion of the site?	great	okay	so-so	poor
Why would you recommend or not recommend this site to someone else researching this same topic?	_____			
What are the 3 AACORD areas that best helped you evaluate this Web site?	_____			
*authority	_____	_____	_____	_____

Name \_\_\_\_\_

Pd. \_\_\_\_\_

**Web Evaluation**

Points Possible

Paragraph 1:

Category identified / introduction					1	0
At least 5 <u>complete</u> sentences	5	4	3	2	1	0
Supporting facts / evidence			3	2	1	0
Conclusion					1	0
Grammar / Sentence structure		4	3	2	1	0
Spelling					1	0

**Paragraph Total: \_\_\_\_\_ / 15**

Paragraph 2:

Category identified / introduction					1	0
At least 5 <u>complete</u> sentences	5	4	3	2	1	0
Supporting facts / evidence			3	2	1	0
Conclusion					1	0
Grammar / Sentence structure		4	3	2	1	0
Spelling					1	0

**Paragraph Total: \_\_\_\_\_ / 15**

Paragraph 3:

Category identified / introduction					1	0
At least 5 <u>complete</u> sentences	5	4	3	2	1	0
Supporting facts / evidence			3	2	1	0
Conclusion					1	0
Grammar / Sentence structure		4	3	2	1	0
Spelling					1	0

**Paragraph Total: \_\_\_\_\_ / 15**

Format

Name, period, date		3	2	1	0
Acceptable font				1	0
Indent				1	0

**Format Total: \_\_\_\_\_ / 5**

**1<sup>st</sup> score**

**Total Points: \_\_\_\_\_ / 50**

**Corrections**

**Additional points: \_\_\_\_\_**

<b>Final Total: _____ / 50</b>
--------------------------------

**Comments:**

## **Web Evaluation (Modified Activity)** (Required Assignment)

Although this would normally be a five-section paper, we are not going to write the opening section (introduction) or the final section (overall conclusion). We are going to focus on the content and proof of the three supporting sections.

Note: The Web Evaluation Guide Sheet and this assignment have been discussed with students. They have also been introduced to related information throughout several earlier lessons. This assignment sheet is just a reference sheet to provide assistance.

Before completing this assignment, you should have completed a Web Evaluation Guide Sheet to help you identify points you need to consider within each category.

Section 1: This section will focus on authority. It is important to identify the author and/or sponsors of a site. If the authority is not valid, other categories you evaluate will have to be extra strong for you to consider this a valid site.

When writing the paragraph keep in mind these points:

- Include the name of the site evaluated (not the URL)
- Make sure the evaluated category (authority) is clearly identified.
- Include at least five complete sentences.
- Include **specific** supporting facts or evidence. (This should be names, facts, or location of this information within the site or from another site, etc.) Don't just include the points from the guide sheet – prove them. If you say a source is reliable, then you must prove it with facts. **This is the most important focus of your section. You can't just say it; you must prove it.**
- Make sure your conclusion on the validity of this category is clearly expressed. (Don't use words like good, nice, fine, etc.)
- Avoid grammar and spelling errors.
- Combine short choppy sentences. **Do not simply rewrite the points from the guide sheet.**
- Avoid vague use of pronouns (they, it, etc.)

Sections 2 & 3: Focus one of the remaining categories from the Web Evaluation Guide Sheet (accuracy, objectivity, currency, design or relevancy) for each of these sections. You should choose a category that best supports your overall opinion. (For example, objectivity is best used when you are dealing with a controversial topic.)

- Use the same checklist as above to write your sentences.

Paper format: Include your name, date, and class period. Type the paper using an acceptable (no cursive, no all capitalized, etc.) font. Remember to indent.

Remember: We are not including an overall evaluation of this site. We are just evaluating three individual categories.

Name: \_\_\_\_\_ Class: \_\_\_\_\_ Period \_\_\_\_\_ Date: \_\_\_\_\_

### General Internet Site

Author's last name, first name (if available). "Title of article, document, or page." *Title of site (if different)*. Date of publication, last update or posting (use most recent). Associated or publishing institution or group. Date of access. <url> or [url](#).

#### Example

Hoemann, Dr. George H. "Battle of Bull Run." *The American Civil War Homepage*. 13 Feb 1998. University of Berkeley, CA. 12 May 2000. [sunsite.utk.edu/civil-war](http://sunsite.utk.edu/civil-war).

#### Example – No Author

"Helping People Worldwide." Updated 12 Jan 2001. American Red Cross. 12 Feb 2001. [www.redcross.org/intl/map/index2.html](http://www.redcross.org/intl/map/index2.html).

Remember - an author may not always be listed.

\_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

**Author's last name**                      **Author's first name**                      **Middle**

\_\_\_\_\_

**"Title of article, document, or page"**                      **":Use colon & enclose subtitle, if present"**

\_\_\_\_\_

***Title of site, if different from article or sponsoring group (italicized)***

\_\_\_\_\_

**Day**                      **Month**                      **Year**  
**(Date of publication, last update, or posting)**

\_\_\_\_\_

**Name of associated or publishing group**

\_\_\_\_\_

**Day**                      **Month**                      **Year**  
**(Date of access – when you last looked at the site)**

\_\_\_\_\_

**Url – enclose in angle brackets (< >) or use blue hyperlink format {not both}**

**On the lines below, write out the citation using the correct format. (This section is not required if you type your Works Cited.)**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Name: \_\_\_\_\_

Period: \_\_\_\_\_

Date: \_\_\_\_\_

### Works Cited General Internet Site Self-Assessment

- |  |     |    |
|--|-----|----|
| 1. Did I list the author, if available, last name first?                     | yes | no |
| 2. Did I put in the commas and period as needed?                             | yes | no |
| 3. Did I list the title of the article I read?                               | yes | no |
| 4. Did I capitalize the title like I was supposed to?                        | yes | no |
| 5. Did I use quotation marks around the title?                               | yes | no |
| 6. Is my period inside the quotation marks?                                  | yes | no |
| 7. Did I write the title of the Web site capitalized correctly?              | yes | no |
| 8. Did I make a wavy line under the title to show italics?                   | yes | no |
| 9. Did I have a period at the end?   | yes | no |
| 10. Was there a published, modified, listed, or updated date date available? | yes | no |
| 11. If so, did I list it correctly? (Example: Updated: 23 Apr 2006.)         | yes | no |
| 12. If a specific date was not listed, did I use the copyright?              | yes | no |
| 13. Did I list the name of the publishing/sponsoring group?                  | yes | no |
| 14. Did I capitalize it the group correctly?                                 | yes | no |
| 15. Did I have a period at the end.  | yes | no |
| 16. Did I list the date of access correctly? (Example: 23 Apr 2006.)         | yes | no |
| 17. Did I put angle brackets < > around my url?                              | yes | no |
| 18. Did I write the url correctly?   | yes | no |
| 19. Did I spell all of my words correctly                                    | yes | no |
| 20. Are my sheets in alphabetical order?                                     | yes | no |

Name: \_\_\_\_\_

Period: \_\_\_\_\_

Date: \_\_\_\_\_

### Self-Assessment for Typed Works Cited

- |  |     |    |
|--|-----|----|
| 1. Did I insert a <u>header</u> with my name, class & period, and date <u>right-aligned</u> ?  | yes | no |
| 2. Did I center and spell the title Works Cited correctly?                                     | yes | no |
| 3. Are my citations in alphabetical order?   | yes | no |
| 4. Did I use a hanging indent?   | yes | no |
| 5. Are all authors listed last name first?   | yes | no |
| 6. Did I put periods at the end of each section of information?                                | yes | no |
| 7. Did I capitalize titles and group names as needed?  | yes | no |
| 8. Did I use quotation marks around the title of Web articles?                                 | yes | no |
| 9. Is my period inside the quotation marks?  | yes | no |
| 10. Did I italicize Web site titles?   | yes | no |
| 11. Did I write the publishing and access dates in the correct format? (Example: 23 Apr 2006.) | yes | no |
| 12. Did I make sure my url hyperlinked (turned blue)?  | yes | no |
| 13. Did I copy and paste the url so that it is correct?  | yes | no |
| 14. Did I spell all of my words correctly  | yes | no |
| 15. Did I use quotation marks and underlining correctly for print sources?                     | yes | no |
| 16. Is all of my information complete?   | yes | no |
| 17. Is all of my information accurate?   | yes | no |
| 18. Do I have the number and type of sources required?   | yes | no |

Works Cited

“About Cerebral Palsy?” *4MyChild.com*. 2003. Law Firm of Korn and Stern. 14 Sep 2003. <<http://www.cerebralpalsy.org/about.htm>>.

“What Causes Cerebral Palsy?” *Cerebral Palsy: A Guide for Care*. Alfred I. duPont Institute of the Nemours Foundation, duPont Hospital for Children. 12 Sep 2003. <[http://gait.aidi.udel.edu/res695/homepage/pd\\_ortho/clinics/c\\_palsy/cpweb.htm#RTFTtoC3](http://gait.aidi.udel.edu/res695/homepage/pd_ortho/clinics/c_palsy/cpweb.htm#RTFTtoC3)>.

Name: \_\_\_\_\_ Pd. \_\_\_\_\_ Total Points: \_\_\_\_\_

**Form (See Sample Above)**

- Heading, spacing (after heading info, Works Cited, between sources)..... **2pts** ..... **1 pt**  
..... **0 pts**
- Name/class/date – right aligned..... **1 pt** ..... **0 pts**
- Citations – alphabetized..... **1 pt** ..... **0 pts**
- Hanging indent..... **2pts** ..... **1 pt** ..... **0 pts**

**Punctuation**

- Periods (with following space) at end of each section ..... **2pts** ..... **1 pt**  
..... **0 pts**
- Quotation marks (with periods inside) as needed .. **2pts** ..... **1 pt** ..... **0 pts**
- Italics used correctly ..... **1 pt** ..... **0 pts**
- URL easily identifiable (underlined or < >) ..... **1 pt** ..... **0 pts**

**Information**

- Spelling & capital letters..... **2pts** ..... **1 pt** ..... **0 pts**
- Info appears accurate ..... **2pts** ..... **1 pt** ..... **0 pts**
- Info appears complete ..... **2pts** ..... **1 pt** ..... **0 pts**
- Dates present and written correctly..... **2pts** ..... **1 pt** ..... **0 pts**

Note (if needed):

## Women of the War

Single parent families are very common in modern day times. But were they common back during American Revolution? Quite possibly. Deborah Sampson grew up in a single parent family. Did this affect her role in the American Revolution?

I already knew from a book I read in the library that Deborah Sampson's father left her and her family when she was nine years old. I also know that she was the eldest of seven children and she spent much of her time taking care of them and helping her mother around this house. When she was eight or ten, she was sent to be an indentured servant to the Thomas family. This family had all boys and no girls; therefore she grew strong and became able to do many things most women of that time could not do. I want to know how her father leaving her family affected her role in the war. Since I am very interested in the roles of women in the war and in women and men being equal and able to do the same things no matter the gender.

My search for the answer to my big question was extremely difficult. I was not able to get a direct answer. I went to AskJeeves.com and typed in "How did Deborah Sampson's father walking out on her and her family affect her role in the war?" I asked Mrs. Ault for assistance and she told me to go to Google.com and type in *Deborah Sampson biography*. I found a few Web sites that gave me a better idea of what happened but none of them were very useful. The one

Web site I found gave me more information than any of the others. This Web site was Rootsweb.com.

Because I finally found a good Web site I was able to figure out a lot of my big question. To begin with, my Web site had good authority. It was written by Jeannie Winter, who has put out many biographies about famous people. Also, many universities and libraries link to this site. Being kept up-to-date is another reason I liked this Web site. It was last updated on September 17, 2005. It is full of great historical information. In spite of the revolutionary men on the background of this page, the design was wonderful. The background was a light gray and the font was black. Everything was very easy to read and find. There were pictures that helped to show different parts of Sampson's life. The pictures have borders around them that help them to pop out of the screen. The font was fairly large as well. I was able to maneuver around this site easily and find the information quickly. This was a great site and I recommend it to anyone wanting to improve his or her knowledge on Deborah Sampson.

How did Deborah Sampson's father walking out on her and her family affect her role in the war? When Sampson was five years old, her father left her mother for another woman in Maine. This made it very hard for the mother since there were six children for whom to care. Sampson, herself, had to take on the fatherly chores because she was the oldest. However, when she was about eight or ten, she was sent to be an indentured servant to the Thomas family. The only children in this family were boys so Sampson grew to be a strong and well-

bodied woman. Her background had prepared her to do many things in life, and it helped her to become the national heroine that she is today.

I was never able to find a direct answer to my big question. Although, using inference, I was able to get a good idea of what the correct answer would be. She was the oldest of six children in a single parent family. Since she was the oldest she did the harder jobs that the father would normally do. This made her strong. Also, it probably made her have a strong stomach and could be able to handle many gruesome things. Growing up she always played the man's role. Another reason that could have influenced her was her extremely close relationship with her grandmother. Her grandmother told her many stories about famous heroines who risked their lives for what they believed in. So, I believe that as she got older and the war began, she did not hesitate to join. But, because she was a woman, she was turned down. A few years later she tried again, but this time she impersonated a man and was enlisted in the army. She fought well and did what she had to do until a doctor found out her secret. The doctor reported her to George Washington who gave her an honorable discharged and made her go home. She married and had three children. Her death came at the age of sixty-seven.

I have learned many things over the past couple of weeks. I have learned about the American Revolution, women who fought in the American Revolution, how living in a single parent family can affect you, and many other things. I can now see how hard it can be for the children of single parent families. This

research has made me have a greater level of respect for them. It also made me realize how lucky I am to have both of my parents living under the same roof. My research ability has improved as well. I now use stronger keywords to research with. Completing this research has taught me many things.

Works Cited (8<sup>th</sup> Grade Student Sample, cont.)

"Deborah Sampson Gennant: American Patriot." The American Revolution. 1996-2005. Americans.net. 13 Dec 2005.  
<http://americanrevolution.com/DeborahSampson.htm>.

Fowler Jr., William Morgan. "Sampson, Deborah." World Book. 1996 ed.: 81.

Garcia, Jesus. Creating America: A History of the United States. Evangston: McDougal Littell, 2002.

Winter, Jeannie. "Deborah Sampson: Soldier of the American Revolution." 2005. Notable Women Ancestors. 29 Nov 2005.  
<http://rootsweb.com/~nwa/sampson.html>.

**D**

EATH TO THE JEWS! Anyone of Jewish blood is inferior. They take the Aryan living space. They are the reason for all the bad things in this world. They must be dealt with!

**I**

nnocence. Innocent men, women, and children killed. Thousands are killed daily. Killed by slave labor, deprivation, gassing, and disease.

**S**

urvivors are skin and bone. They were disease stricken and plagued with the horrid memories of their times in the concentration camp.

**L**

iberation. American and Russian soldiers entered the concentration camps. The Jewish held in the camps were freed. They finally received the food necessary for their survival. They also received cigarettes, candy, and first aid.

**I**

n every camp thousands died. The German's dislike for them grew every day. Today one family was torn apart. A mother was killed in front of her child. The child didn't know what to do. Neither did anyone else.

**K**

-rations, food, and cigarettes were given to all survivors. They suffered from malnutrition. Soldiers gave them rice, cereal, pork, and dairy. They gradually regained their health.

**E**

very day more people are liberated. The number of concentration camps diminishes every day. The survivors are grateful yet, they still spend nights crying over lost loved ones. No one will ever be able to understand the horrors that they have witnessed these past months.

Tito, E Tina. Liberation: Teens in Concentration Camps and the Teens Who Liberated Them. New York: Rosen Publishing, 1998.

USHMM Photo Archives. "Liberation of Allach." 30 Apr 1945. Online image. A Teacher's Guide to the Holocaust. 22 Mar 2006. <http://fcit.coedu.usf.edu/holocaust/gallery/74599.htm>.