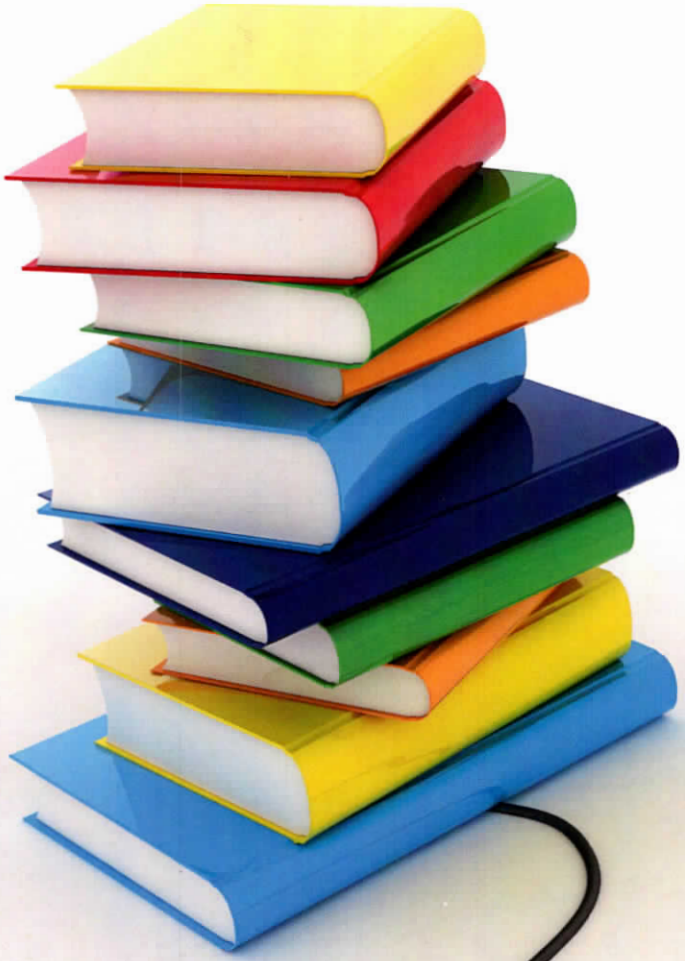
A Painless Guide to Research Using Web 2.0 Tools



Under the Umbrella of 21st Century Learning Skills

Connie Champlin
and
Nancy A.S. Miller
With
David V. Loertscher

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Visit the resource site for this book at:

http://www.lmcsource.com/painless

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Preface

The purpose of this book is to demonstrate how Web 2.0 tools can be integrated into inquiry by using a research model. To do this, we have synthesized a wide variety of documents pointing to 21st century learning skills

We begin by asking teacher librarians to select a research model for use with their learners. We suggest the Savvy Seven model we have created, but this book can be used with many other research/information literacy models. The research model is implicit in many 21st century learning skills documents.

Secondly, we provide suggestions for a Web 2.0 tool to use in teaching each stage of the research model, from learning to construct questions through the sharing of knowledge. Using Web 2.0 tools with learners provides the collaborative learning thread that runs through 21st century learning documents.

Finally, we provide, with each research step, instruments that help both adults and learners assess the knowledge gained and process used for that step, by looking at each of the various threads of 21st century skill documents including inquiry and personal habits.

We believe our approach is simple enough for teacher librarians to wrap their head around in order to provide the motivating spark that helps learners to understand more deeply what research is while engaging them in a life-long quest to become more sophisticated learners.

The entire research process need not be taught and assessed within a single learning experience, though it could be implemented for a major research project. Rather, we see a targeted research skill integrated, as warranted, into a smaller topical unit being co-taught by classroom teacher and teacher librarian. Other skills might be targeted for other lessons. While we introduce a particular Web 2.0 tool for each research skill or step, we also suggest other tools that may be used.

Reflective assessment practice, both self- and teacher-based, is encouraged at every step of the research process. Reflecting upon both *what* and *how* a student learned will only strengthen and deepen understanding.

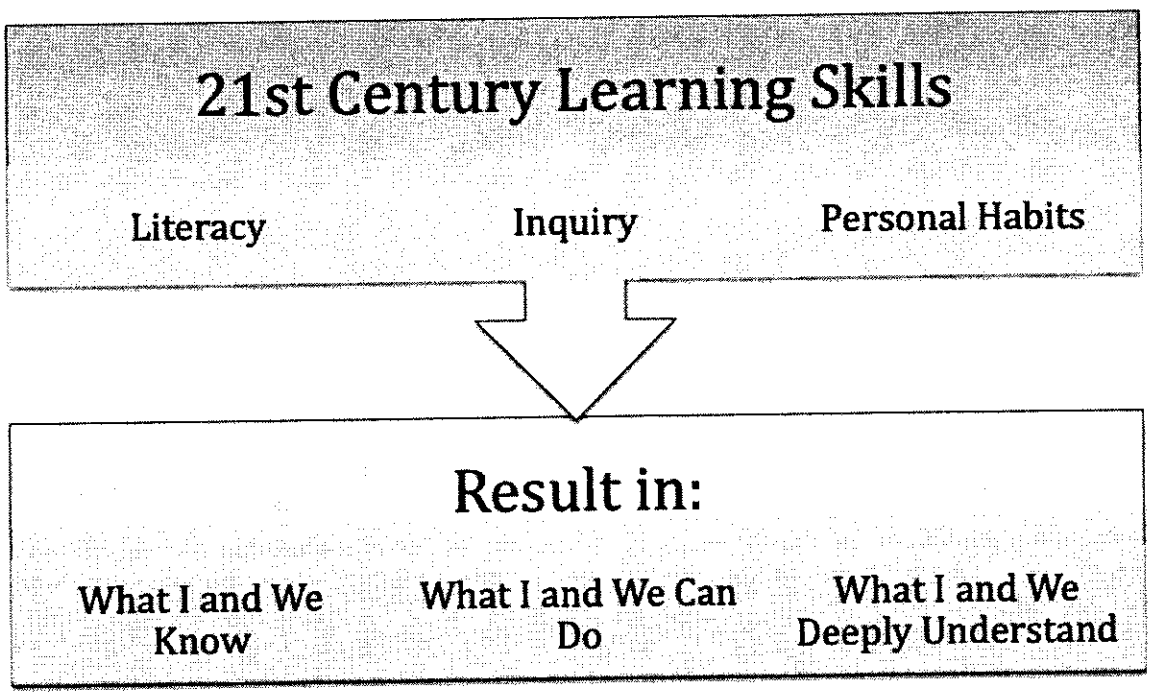
Additional information, including downloadable forms, can be found at the website attached to this book at: http://www.lmcsource.com/painless.

While use of Web 2.0 tools is often controversial in our schools (and access may be initially blocked), we believe that these tools provide a great stimulus to learning. Potential benefits make the use of Web 2.0 inevitable as these tools have inherent power to motivate learners and foster collaboration, thus contributing to student achievement.

Introduction:

Inquiry in a Web 2.0 World

Over the last decade, a number of major thinkers and professional organizations have issued various documents addressing the topic of skills needed by the 21st century learner. These are framed by the world of information, technology, and in particular, the opportunities to boost learning through Web 2.0 tools.



Of the major 21st century skill categories, everyone agrees: a high level of reading skill is foundational to every other skill. Various groups have enlarged the concept of literacy to include a variety of other learning literacies such as visual literacy, media literacy, technology literacy, and information literacy among others. We choose to include the concepts of many of these literacy proposals into the other two major categories: Inquiry and Personal Habits. Looking across a number of major documents, proposals, standards and guidelines from a wide variety of professional groups, we made a list of subskills that define and elaborate on the concepts of Inquiry and Personal Habits framed from the learner's point of view.

21st Century Learner

Inquiry

- Build background
- Ask questions
- Identify resources, locate and gather quality information
- Effectively use information
- Create products, share, and apply findings
- Reflect on (evaluate) content and process

Practice of above skills will result in improved:

- Reading Comprehension
- Critical thinking
- Problem solving
- Creative thinking
- Deep understanding
- Collaborative skills
- Communication skills
- Technology skills

Personal Habits

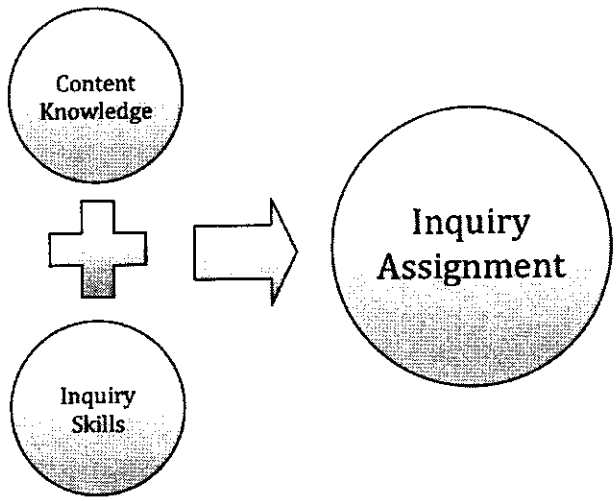
- Reflection
- Empathy
- Independence
- Work
- Fairness and respect
- Ethics
- Confidence
- Flexibility
- Responsibility
- Openness
- Risk taking
- Leadership
- Sound thinking
- Inquisitiveness
- Attitude
- Initiative

Documents Synthesized:

1. Wiggins, Grant and Jay McTighe. *Understanding by Design*. Expanded 2nd ed. Prentice Hall, 2005. See the Six Facets of Understanding.
2. The Critical Thinking Community page at: http://www.criticalthinking.org/index.cfm
3. Habits of Mind website at: http://www.habits-of-mind.net/
4. International Baccalaureate strivings: http://www.ibo.org/
5. Richardson, Will. "An Introduction to New Internet Literacies for Educators: Blogs, Wikis, RSS, Online Bookmarking." From Will Richardson's wiki at: http://weblogged.wikispaces.com/New+Internet+Literacies
6. Gardner, Howard. *Five Minds for the Future*
7. Kuhlthau, Carol C. and Ross J. Todd at the Center for International Scholarship in School Libraries at Rutgers University and expanded in Guided Inquiry: Learning in the 21st Century. A collaborative space, designed to facilitate sharing information about the theory and practice of Guided Inquiry is found at: http://guidedinquiry.ning.com/ See also Kuhlthau's book entitled: *Guided Inquiry*, Libraries Unlimited, 2007.
8. Jenkins, Henry. See his participatory culture at: http://www.projectnml.org/files/working/NMLWhitePaper.pdf

9. Koechlin, Carol and Sandi Zwaan. *Q Tasks: How to Empower Students to Ask Questions and Care About Answers.* Pembroke Publishers Ltd, 2006. A guide for building research questions.
10. Marzano, Robert J., Debra J. Pickering, and Jane E. Pollock. *Classroom Instruction That Works: Research-Based Strategies for Increasing Student Achievement.* ASCD, 2001.
11. American Association of School Librarians. "Standards for the 21st-Century Learner," at: http://www.ala.org/ala/mgrps/divs/aasl/guidelinesandstandards/learningstandards/standards.cfm
12. Partnership for 21st Century Learning "The Intellectual and Policy Foundations of the 21st Century Skills Framework," at: http://www.21stcenturyskills.org/route21/images/stories/epapers/skills_foundations_final.pdf http://www.21stcenturyskills.org/route21/images/stories/epapers/skills_foundations_final.pdf
13. Anderson, Lorin W., David R. Krathwohl, and Benjamin Samuel Bloom. *A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives.* Longman, 2000. A revision of the popular taxonomy.
14. Marzano, Robert J. and John S. Kendall. *Designing & Assessing educational objectives: Applying the New Taxonomy.* Corwin Press, 2008. An elaboration and restructuring of Blooms Taxonomy from a different perspective.

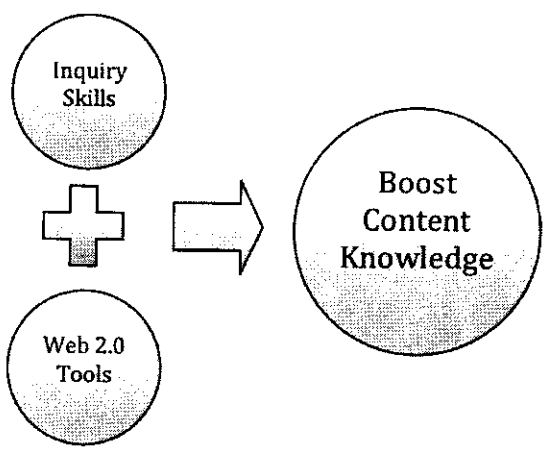
In simple terms, when a class or individual comes to the library media center/learning commons to engage in an inquiry activity there are actually two parts to that activity/assignment:



Thus, at the end of the learning experience a student may think, "I have gained deep understanding about the content/topic, and I have done so because I keep improving my inquiry/learning-how-to-learn skills. Because I keep getting better as a learner, I can master just about anything I want to learn. In fact, I have become such a good learner, I can use my skills to actually create new knowledge. And, along the way, I have developed my set of personal habits as a learner."

As the classroom teacher and the teacher librarian progress through an inquiry assignment, particularly in the information-rich and technology-rich world of the "learning commons," they want to integrate both content learning and inquiry skills in such a way that both maximize the learning in the time that is available. The learning process is not just the regurgitation of a bunch of facts just to pass a test; it is an increasingly sophisticated path toward deep understanding. That is why we say, as teacher librarians, that two heads are better than one as we co-teach with our classroom colleagues. This collaborative approach is still a secret, yet to be discovered by many in the world of education.

As we watch the current generation of social network-savvy learners, we have urged that those skills be utilized to boost the learner's academic skills. As a whole new set of skills is turned into the collaborative world of Web 2.0 tools, the potential to boost content knowledge as a part of knowledge building increases exponentially.



We are impressed that many Web 2.0 tools automatically add another dimension to the inquiry process that is emphasized in 21st century documents. That dimension is a *collaboration* feature where users can work together, virtually, on a single document or process. In addition, Web 2.0 tools have the potential to develop and strengthen communication and technology skills, two other aspects of the inquiry process promoted in the 21st century documents.

We are aware that many teacher librarians use an information literacy or research model to guide the inquiry process. These models effectively step children and teens through a logical process from asking a good question, locating and analyzing information, on to creating a product and sharing it with others. In this book, we add a self-reflection activity for learners to each stage of the process as a way for learners to improve their inquiry skills over time.

We propose that educators integrate Web 2.0 tool use at each step of a research model to boost content knowledge as well as develop robust student inquiry (and technology) skills.

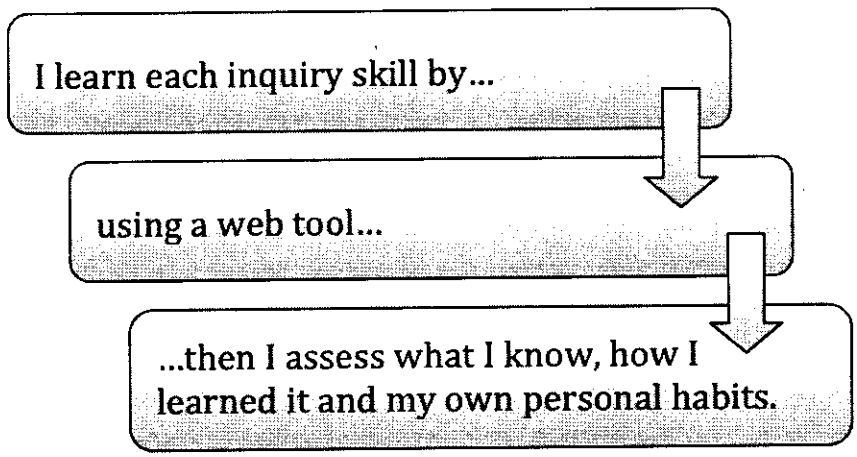
This book lays out a three-step process:

1. Choose an information literacy model to use during the inquiry process. (We use the Savvy Seven model in our examples.)
2. For each step of the inquiry process, incorporate a Web 2.0 tool to support collaborative student learning.
3. At the conclusion of each step in the model, use a reflective assessment process to determine what students know and how they learned what they know.

Throughout a learning experience, educators should draw attention to and teach the value of the various personal habits.

The reflective assessment tools provided herein address the dimensional threads running through the major 21st century categories: inquiry and personal habits.

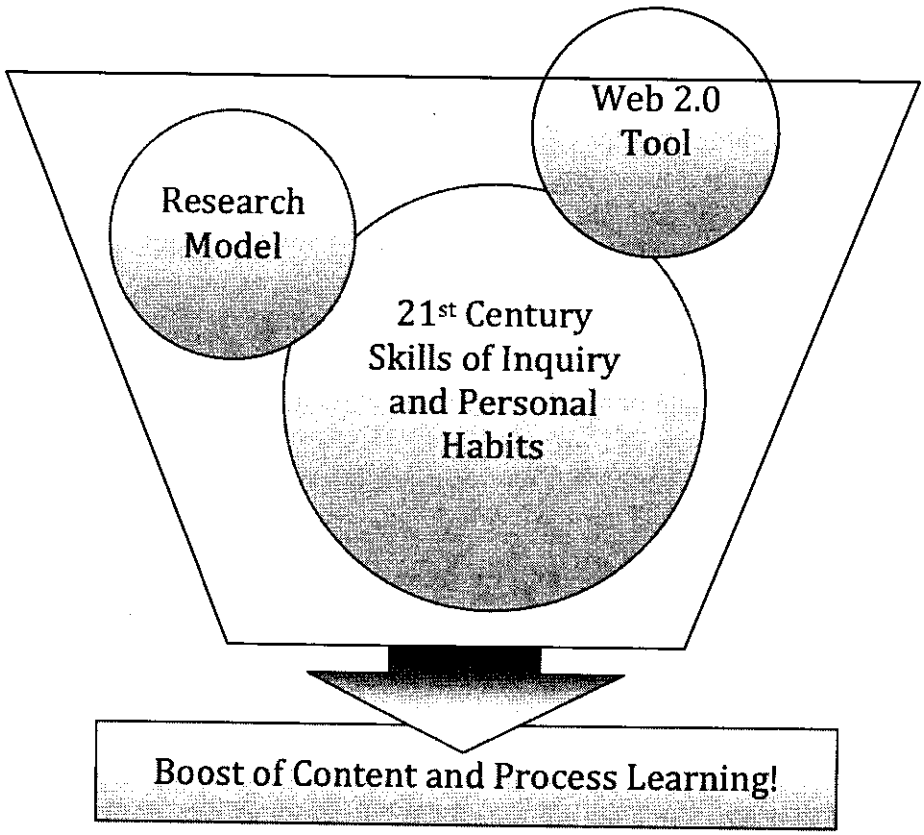
To illustrate the three-step process, a learner says:



For example:

- After learning how to use a wiki to assemble the best information sources, our group read each source carefully and threw out those that did not meet our criteria. We reflected on our critical thinking and our work ethic as a group after we finished.
- After making podcasts of various positions on a tough issue, our class reflected on openness to various ideas, respect for other's opinions, and creative ideas that might bring the two sides closer together in order to respectfully disagree instead of declaring war.

The process, from the teacher librarian point of view, is illustrated below:



There is yet another factor to consider. Though one might like to take learners step-by-step through the entire research model for every assignment, it is often not possible because of time constraints. We suggest teacher librarians emphasize a single inquiry skill or research model step that suits a particular lesson to be learned. For example, during African American History month, where learners are assigned to investigate a particular person of their choice, students often have difficulty getting started because they don't know how to formulate good questions about any person's life and his/her accomplishments. This is the perfect time for teacher librarians to focus on questioning skills. Then, later in the year, choose one or more other inquiry skills to emphasize from the adopted research model.

Web 2.0 tools support innovative uses to stimulate the learning of both a particular inquiry skill and the content knowledge that is sought. Before implementing our "Painless" three-step process, we first discuss and explore various research models and their implementation. Then, in the balance of the book, we address each step of one model (Savvy Seven), integrating a specific Web 2.0 tool and the reflective assessment that can be used at that particular stage of the research. Of course, the reader can adapt the process to any model and integrate any number of Web 2.0 tools. We offer a few suggestions for each step.

Recognizing that districts have a wide range of policies and restrictions on the use of Web 2.0 tools, we are confident that blocking exceptions will be made as you demonstrate valuable learning gains under supervised use. As technology directors become more interested in learning and participate with actual learners in research using Web 2.0 tools, they will begin to open access to even more tools for purposeful use. Include the technology staff members in experimental trials using particular tools, then document stories of superior learning due to the use of "their" technology systems.

Getting Started: Choose a Research Model

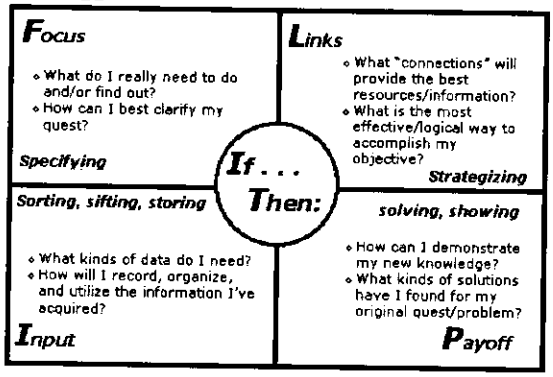
To help you select a research model the following are provided:

- Diagrams or logos of many familiar research/information literacy models currently used by teacher librarians
- Outlined steps of several models to help you compare and contrast them
- Points to consider as you select a model for your program/school
- A rubric for the selection of a research model that fits under the umbrella of the AASL standards and your school's goals
- An expanded explanation (and some useful tools) for implementation of the Savvy Seven model

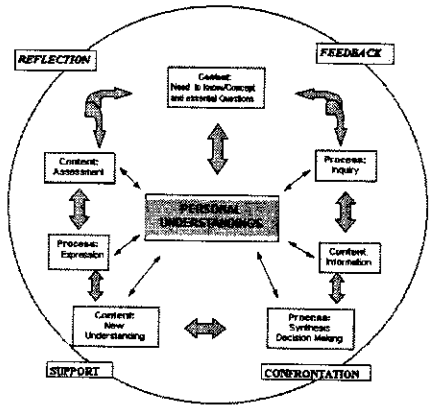
A Sampler of Research Models

A Ask Questions
G Gather Information
O Organize Information
P Prepare/Produce Information
P Present and Assess Information
E Evaluate

FLIP-IT



Thoughtful Learning Cycle

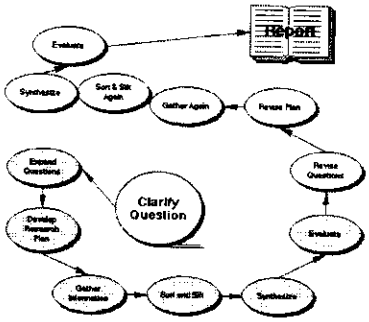


The Big 6™

I-SEARCH
Phase I
Phase II
Phase III
Phase IV

QUEST
Questions
Uses
Excellent
Summarizes
Technology/Techniques

The Research Cycle (McKenzie)

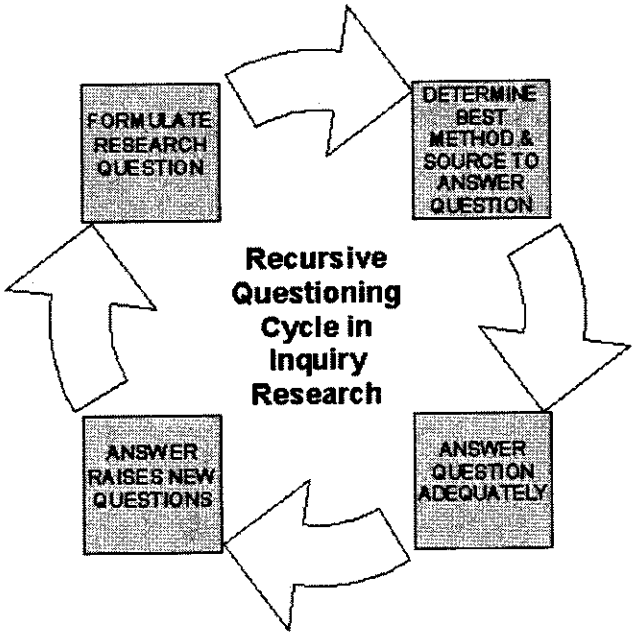


KC Tools
I Wonder
I Find
I Evaluate
I Share

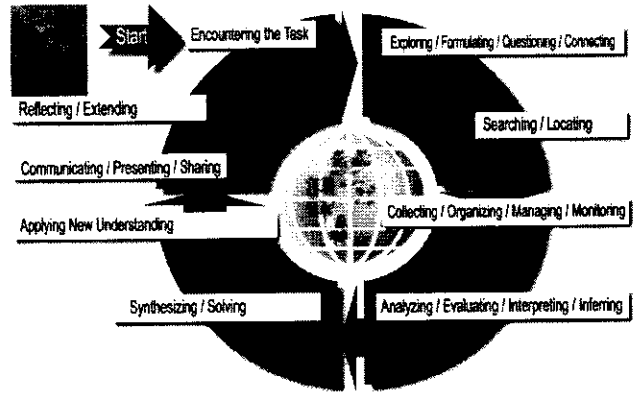
Super 3
Beginning
Middle
End

SUCCEED
Select
Uncover
Collect
Compile
Evaluate
Establish
Determine

Student Inquiry in the Research Process (Perry Twp.)



Information Seeking Behavior



More information about each of several research models is available in a series published in *School Library Media Activities Monthly*, January through June issues of 2003.

RESOURCES for Exploration

Looking at what is available

http://www.indianalearns.org

From the main page click on the link to "Creating an Information Literate Learner" to access several links to popular research models.

Resources for School Librarians: a directory page with many links regarding information skills, standards and research models.

http://www.sldirectory.com/libsf/resf/infoskill.html

S.O.S. Lesson Plans and video clips of school library media specialists talking about lessons implemented and lessons learned about teaching students in effective library use and information literacy.

http://www.informationliteracy.org/

RESEARCH MODELS

Traditionally, students do little "research" or investigation until secondary school. However, the advent of rich information environments provides all students with the opportunity to develop investigative strategies, become problem solvers, and meet state standards at the same time.

Beginning inquirers need guidance in developing a process for doing research. Each student can be introduced to a research process model adopted by faculty for the school. The library media specialist should have numerous examples of research process models available for consideration by the faculty and can take the lead in teaching this concept to the faculty as a whole.

Examples of research models are shown below:

8Ws—Annette Lamb
http://virtualinquiry.com/inquiry/ws.htm

- Watching
- Wondering
- Webbing
- Wiggling
- Weaving
- Wrapping
- Waving
- Wishing

AGOPPE—Montgomery County Public Schools (MD)
www.montgomeryschoolsmd.org/schools/briggschaneyms/agoppe.html

- **A**sk Questions
- **G**ather information
- **O**rganize information
- **P**repare/ Produce information
- **P**resent and Assess information
- **E**valuate

Big 6™—Bob Berkowitz & Mike Eisenberg
http://www.big6.com/

- Task Definition
- Information Seeking Strategies
- Location and Access
- Use of information
- Synthesis
- Evaluation

Building Blocks of Research—Noodle Tools Deb Abilock
http://www.noodletools.com/debbie/literacies/information/1over/infolit1.html

- Engaging
- Defining
- Initiating
- Locating
- Examining, selecting, comprehending, assessing
- Recording, sorting, organizing, interpreting
- Communicating, Synthesizing
- Evaluating

FLIP IT—Alice Yucht
http://www.aliceinfo.org/flipit

- Focus — specifying
- Links — strategizing
- Input — sorting, sifting, storing
- Payoff — solving, showing

I-Search—
http://www.literacymatters.org/content/isearch/phases.htm

- Phase 1: Becoming Immersed in Topic & Generating Question
- Phase 2: Developing Search Plan
- Phase 3: Gathering & Integrating Information
- Phase 4: Representing Knowledge

INFOhio DIALOGUE
http://www.infohio.org/id/dialogue.html

- Define
- Initiate
- Assess
- Locate
- Organize
- Guide
- Use
- Evaluate

Information Literacy Model—David Loertscher
http://www.indianalearns.org/infolitinvest.asp

- Question & Wonder
- Find & Sort
- Consume & Absorb

- Think & Create
- Summarize & Conclude
- Communicate
- Reflect

Information Seeking Behavior
http://www.bcps.org/offices/lis/models/tips

- Encountering the task
- Exploring
- Searching
- Collecting
- Analyzing
- Synthesizing
- Communicating
- Reflecting

KC Tools—Kids Connect AASL
http://www.ala.org/aaslTemplate.cfm?Section=K-12_Students&Template=/ContentManagement/ContentDisplay.cfm&ContentID=21725

- I Wonder
- I Find
- I Evaluate
- I Share

Pathways To Knowledge—Follett
http://www.sparkfactor.com/clients/follett/home.html

- Appreciation
- Presearch
- Search
- Interpretation,
- Communication
- Evaluation

QUEST!—Carmel Clay Schools (IN)
http://www1.ccs.k12.in.us/district/information-services/quest

- Question—ask good questions
- Use—use many resources to verity
- Excellent and Ethical—choose excellent resources and use them ethically
- Summarize—summarize what you have learned
- Technology—use appropriate technology tools well.
- !—Reflect and celebrate what you have learned.
- Students who can QUEST! are information literate!

Research Cycle—Jamie McKenzie
http://questioning.org/module/cycle.html

- Question
- Plan
- Gather
- Sort, Soft and Analyze
- Synthesize
- Evaluate
- Report

Research Steps—Sandra Hughes
http://www3.sympatico.ca/sandra.hughes/sandra.hughes/research/default.html

- Preparing
- Accessing
- Processing
- Transferring

Research Steps For primary students

- Prepare
- Find
- Think
- Share & Reflect

Savvy7: It's All In The Questions—Connie Champlin & Nancy Miller
http://www.lmcsource.com/pages/savvy7.html

- What is the Question?
- What Resources Should I Use?
- How Do I Find the Information?
- How Do I Gather the Information?
- Which Information Do I Use?
- How Do I Share What I Learned?
- How Do I Evaluate My Work?

Student Inquiry in the Research Process—Leslie Preddy—MSD Perry Township Schools (IN)—http://www.lesliepreddy.com/Inquiry/inquiry%20index.HTM

- Orientation
- Exploration
- Strategy
- Investigation
- Conclusion & Reflection

Succeed—Newfoundland, Canada
http://www.stemnet.nf.ca/~acrawfor/lrc2b.html

- Select and focus topic and information needs.
- Uncover potential sources of information. Learn how to access them. Collect, examine, and select suitable resources.
- Compile relevant information from selected sources.
- Evaluate, interpret, analyze, and synthesize the information.
- Establish and prepare an appropriate format and present the information.
- Determine the effectiveness of the whole process.

Super3—Tami J. Little
http://academic.wsc.edu/redl/classes/Tami/super3.html

- Beginning: Task definition & Information Seeking Strategies
- Middle: Location & Access
- End: Synthesis & Evaluation

Thoughtful Learning Cycle—Barbara Stripling & Judy Pitts
http://lsit.coe.ecu.edu/project/graphic.htm

- Concept & essential question
- Inquiry
- Information
- Synthesis & Decision making
- New understanding
- Expression
- Assessment

Examining Research Models

Before selecting a research model for your school or district, examine a variety of models. Create a committee composed of teachers, library media specialists, principal, curriculum director or department head, parents and students. Develop criteria to assist the committee. The following criteria provides a place to begin:

Comprehensive Nature

- Addresses all components of research skills and best practice
- Is detailed enough to encourage teacher instruction of component skills
- Provides a framework easily suited to a conducting a variety of research initiatives in many subject areas

Ease of Use

- Easy to remember (acronym or visual metaphor)
- Uses logical sequence or grouping of skills
- Promotes "habits of learning" that transfer to life skills

Flexible Format

- Can be easily adapted to less/more experienced researchers
- Freely reproduced & distributed
- Instructional focus can be modified to meet project and student needs
- Support material available
- Adaptable for variety of age groups

Add your own points to consider:

Rubric for critiquing Research Models to support student attainment of Information Literacy skills

Considerations	Good	Better	Best
Consistency of Use • One model adopted school-wide • All staff and students know how to use it • Regularly used to support classroom learning	A model is promoted and used by the library media specialist with students but is understood or used by only a few classroom teachers.	All teaching staff are trained in implementing a research model and many are implementing their choice of model in regular classroom research assignments.	A single model has been selected for adoption by the entire school (or district), all staff and students have received training, and the model is regularly used by all students and staff at all grade levels and in all curriculum areas.
Comprehensive Nature • Addresses all components of research skills and best practice • Is detailed enough to encourage teacher instruction of component skills • Provides a framework easily suited to a conducting a variety of research initiatives in many subject areas	Focus is on finding and using text-based content, but does not encourage use of non-standard media or resources found outside of school library. Model is used as a cursory checklist more than as an instructional framework.	Describe a "better" scenario here...	Describe a "best" scenario here...
Ease of Use • Easy to remember (acronym or visual metaphor) • Uses logical sequence or grouping of skills • Promotes "habits of learning" that transfer to life skills	Describe a "good" scenario here...	Model includes a reasonable number of stages for the research process in a logical progression. Students using the model can identify activities inherent to different stages/steps in the model.	Describe a "best" scenario here...
Flexible Format • Can be easily adapted to less/more experienced researchers • Freely reproduced & distributed • Instructional focus can be modified to meet project and student needs	Describe a "good" scenario here...	Describe a "better" scenario here...	Model is copied freely and distributed to students & families. Teachers have articulated "standards" of student research performance and modified the model language for instructional use at respective grade levels.

Introduction to the Savvy Seven Research Model

On the following pages, we introduce the Savvy 7 research model as one way to structure an inquiry project. Its steps are then used in the balance of the book to demonstrate the use of Web 2.0 tools. Readers are encouraged to adapt all of our recommendations to the learners in the local school at an appropriate sophistication level.

Here is a list of each of the following pages of the chapter and their purpose and usefulness:

Page 18: The Savvy Seven Research Model—A reproducible page listing the steps of the model and explanations accompanying each step.

Page 19–24: Sample forms for helping learners build good questions.

- **What is the Question?**—A handout or text for the teacher/teacher librarian about asking questions.
- **What Do I Want to Know?**—A graphic that can be used with students to begin and write an essential question.
- **It's All in the Questions!**—A list of question examples learners can use to identify the types of questions: topic, simple question, investigative question, imaginative question, or an essential question.
- **Research Planning Form**—A blank form learners can use to begin planning their searching for information.
- **A Sample Research Planning Form**—A form with hints on what to write in the various Planning Form boxes.
- **Gathering Grid**—A form for learners to use as they begin the process of searching for information to use.

The Savvy Seven Research Model

Developed by Connie Champlin and Nancy Miller

1. What is the Question?
2. What Resources Should I Use?
3. How Do I Find the Information?
4. How Do I Gather the Information?
5. Which Information Do I Use?
6. How Do I Share What I Learned?
7. How Do I Evaluate My Work?

1. **What is the Question?** — Go beyond a topic or "fact-finding" to create a "smart question", one that is essential, elaborating, probing or even irreverent. From this one overarching question, break your search into a few or several "investigative" questions. Identify what you already know and then choose keywords and phrases to use in your search for what you want to learn.

2. **What Resources Should I Use?** — Look for quality primary and secondary sources of information (people, places, things, books, periodicals, images, video, etc.) in your school or other libraries, in the community and on the World Wide Web. Choose those resources that best suit your research question and that are accessible to you.

3. **How Do I Find the Information?** — You need both "technical" and "thoughtful" literacy skills to find information within your identified resources. Your ability to conduct an interview, search through a catalog or index, use a computer, and access web portals or web search engines are greatly enhanced by also knowing how to scan for appropriate content, then expand or narrow your search through use of appropriate use of synonyms, antonyms and Boolean logic.

4. **How Do I Gather the Information?** — Once you find potential information for your research, engage with it through reading, listening and viewing in more depth. This is the "first cut" process: If information is valuable to helping you answer your investigative questions, then capture it for later review. Take quality notes (paraphrase!); record audio or video; take photographs; download images, files and articles from web sources; or copy and paste text from web pages into a word processing document. Be sure to note citations (and/or make links) of your sources as you gather content.

5. **Which Information Do I Use?** — It is now time to critically examine the information gathered to determine its ultimate value to your research. Ask yourself: Is the content as current as it needs to be for the questions asked?; Is it from a valid and credible source?; What is the bias of the information source?; Is the information truly pertinent to the essential question or just somewhat related to the topic? At this point you must also determine if you have too much (choose the best, discard the rest), or not enough (search for more) quality information that you can legally use for your project.

6. **How Do I Share What I Learned?** — Communicating what you have learned in your research is an important step even if you did the research just to inform yourself. You may have already determined the type of sharing product to create: a research paper, booklet, article, essay, website, speech, multimedia presentation, video, etc. In this stage you create the components that will comprise your finished product targeted to a specific audience. Organize the information by: rewriting it in your own words, creating tables and graphs of numeric data, adding captions to images, and then by synthesizing the relevant ideas in a cohesive manner and drawing defensible conclusions.

7. **How Do I Evaluate My Work?** —The evaluation stage of research should address both process and product. To judge the process, ask yourself: Was my research process thorough?. . .efficient?; How could I make it more thorough. . . more efficient?; Did I use a variety of appropriate primary and secondary sources? Assess the product according to assignment guidelines or a pre-established rubric, addressing such questions as: Is my product effective in answering the question?; Is it appropriate for the target audience?; Is it informative, persuasive, creative, entertaining?; Is my conclusion supported well by the evidence presented?; and, Has my information been attributed correctly?

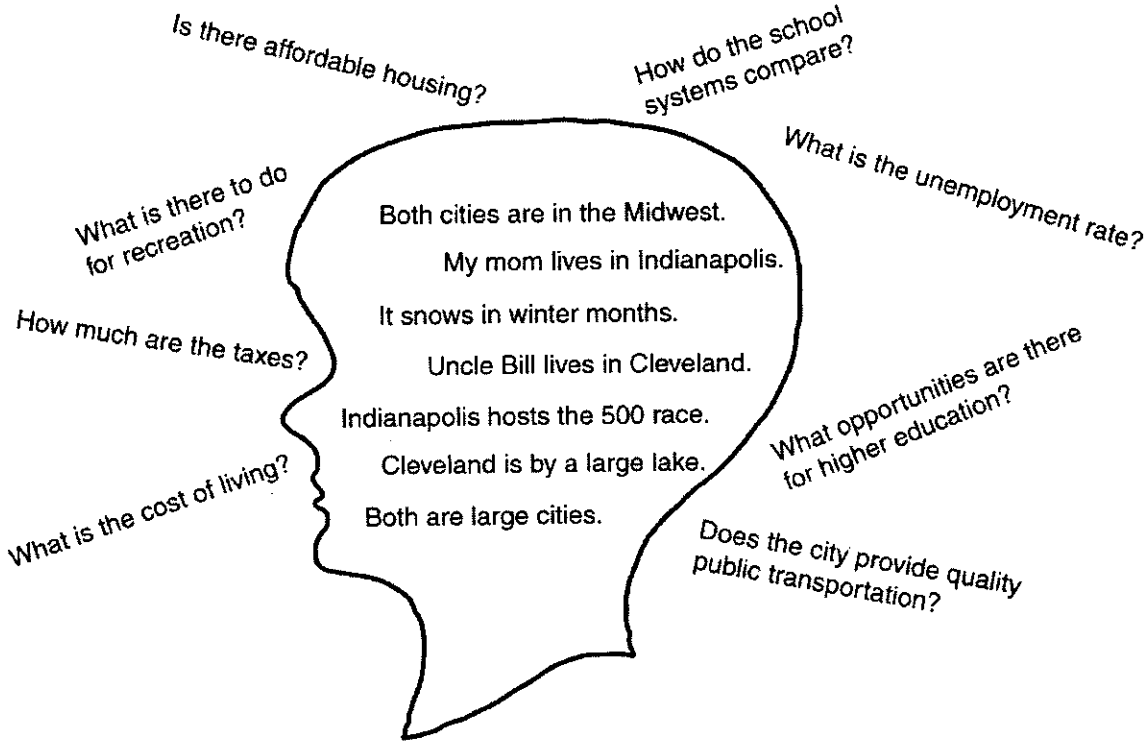
1. What is the question?

A topic is not a question. Questions come from thinking about or discussing a topic and identifying what you want to know or learn about that topic. The best questions to guide development of research projects are "Essential Questions." An essential question defines the overarching purpose of the research. Essential questions may not have just <u>one</u> right answer and typically can be examined from multiple perspectives or angles. They are often "Why?", "How?" or "Which?" questions. Examples follow:

Topics: "Cleveland, Ohio" and "Indianapolis, IN"
Simple Questions: Where is Cleveland, Ohio?; Where is Indianapolis, Indiana?
Investigative Questions: What are the disadvantages of living in Cleveland, Ohio?
What are the advantages of working in Indianapolis, Indiana?
Essential Questions: To which city, Cleveland or Indianapolis, should I move to work and live after I graduate from school?
Why should I spend my vacation in Indianapolis, Indiana instead of in Cleveland, Ohio?

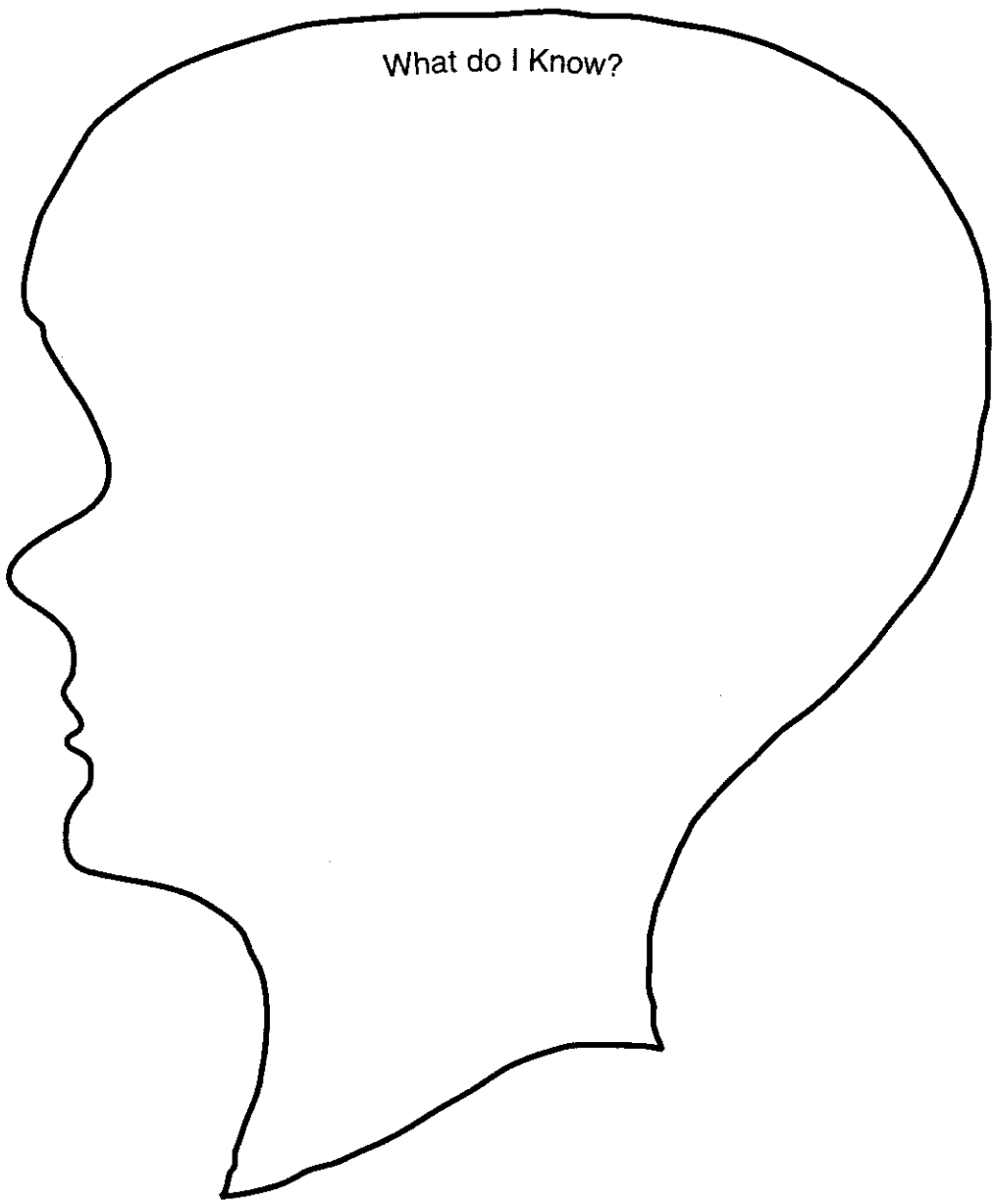
Defining your question. . .

a. Once you pick a topic of interest, explore through discussion or brainstorming what you currently know about that topic. (In the image below, what you already know would be placed "inside" the head.)
b. After listing what you know, identify what is missing or what else you would like to know about the topic. Some of these subtopics will later become "investigative" questions that will support your essential question research. (These would be items outside of the head image below)
c. Now, get to the "heart" of the matter by developing an essential question. The essential question defines the purpose of the overall investigation. An essential question is broad enough to go beyond mere "fact-finding" yet specific enough to suggest some boundaries for the research. Essential questions require higher level thinking and research to answer — they are not "recall" questions nor can they be effectively answered by consulting just one source of information.



My Essential Question. . . To which city, Cleveland or Indianapolis, should I move to work and live after I graduate from school?

What do I want to know?



My Essential Question is . . . .

It's all in the questions!

T is for **T**opic
S is for **S**imple Question
I is for **I**nvestigative Question
E is for **E**ssential Question

For each item below, indicate in the blank whether you think it is a **T**opic, a **S**imple question, an **I**nvestigative question, or an **E**ssential question.

_____ 1. The Civil War

_____ 2. How is family like a library?

_____ 3. How many planets are in our solar system?

_____ 4. What were some of the problems faced by the pioneers?

_____ 5. How can we save the Chesapeake Bay and its inhabitants?

_____ 6. Who wrote the Harry Potter books?

_____ 7. What is the habitat of the Koala bear?

_____ 8. What are the five best states in which to be living as a teenager?

_____ 9. What states entered the union during the Civil War?

_____ 10. When does loyalty become an issue in my life?

_____ 11. What do you know about Indiana?

_____ 12. Which winter recreation activities do you like best?

_____ 13. If Thoreau had worked with a co-author, who might it have been?

_____ 14. Did the illustrations in this book win any awards?

_____ 15. Iraq vs. United States

_____ 16. Games People Play

_____ 17. What is the crime rate in Chicago?

_____ 18. What are the effects of acid rain on forests?

_____ 19. Why does water freeze at 32° F?

_____ 20. Where is the city, Lafayette?

Research Planning Form

Topic:	**Name:** **Class:** **Date:**
Essential Question:	**Approval to Proceed:** (Initialed by teacher and/or media specialist)

Investigative Questions	**Keywords / Key phrases**	**Resources**

"Ah Hahs" and/or "Uh Ohs" encountered in this search:

Savvy 7 Research Planning Form

1. What is the question? 2. What resources should I use? 3. How do I find the information?

Topic: Enter your topic here	**Name:** Student name **Class:** For what class? **Date:**
Essential Question: Type your essential question here.	**Approval to Proceed: (initials)** _____ Teacher _____ Media Specialist

Investigative Questions	Keywords / Key phrases	Resources
Type your first specific investigative question here.	What are some keywords or phrases you might use in a search engine, database, or index?	What resources will you use to find your information for this question?
Type your second specific investigative question here.	Keywords & key phrases - also note synonyms.	Resources might include reference books, texts, videos, periodicals, inspire or other databases as well as the www.
Type your third specific investigative question here.	Keywords & key phrases	Look for both primary and secondary sources in your research.

"Ah Hahs" and/or "Uh Ohs" encountered in this search:

Note the pleasant and unpleasant surprises encountered during your search for information.

This form may be downloaded from ***http://www.lmcsource.com/painless****. It is set up as a "tab & type" form so that students can easily use it to prepare a research plan using Microsoft Word. The prompts for each box will disappear as the student types an entry.*

7 Gathering Grid (my research resources) Name: _____

My Topic is:				
My Essential Question is:				
Investigative Questions:	Books	Periodicals	Online	Other
1.				
2.				
3.				
4.				

I have completed my information gathering from multiple sources and have correctly noted all citations.

Signed: _____ Date: _____

Web 2.0 Tools for the Research Process

In the following chapters, Web 2.0 tools are recommended for each step of the Savvy 7 research model, although theses may be adapted for any model you happen to select and use.

On the first two pages of each chapter we highlight a particular tool and get you started using it. We also suggest other similar tools that could be used for the same research step. The Web 2.0 world is expanding rapidly so keep an eye out for new collaborative tools that might effectively support student research.

For each step of the research process, we provide reproducible forms for individual and group reflection about the learning process and tool used, as well as a rubric for teachers/librarians to use to assess students' skills and personal learning habits.

These forms are available for download from:

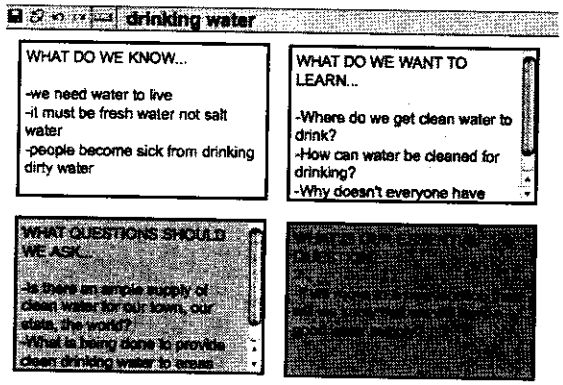
http://www.lmcsource.com/painless

Chapter 1
Research Step One: What is the Question?

21st Century Skills: Build background, ask questions
Personal Habits: Inquisitiveness

The first step in any research project is to define the question. It is important to go beyond topic-based "fact-finding." We can prepare students for a successful engagement with a topic by drawing on what background information they have and then by assisting them to build upon that base. After listing what is known, identify what is missing or what else might be good to know about the topic. The research is quite clear that time spent on building background knowledge is a critical element in helping students meet objectives of the lesson. An effective background knowledge activity will level the playing field among a group of learners. It also serves a second critical function to help students: engage, create, and build upon engaging questions that will spark the motivation needed for an extended investigation.

A background knowledge activity may generate different types of questions. One type is the *simple* question which will typically yield a brief factual answer through implementing a basic search, e.g. "How much of the earth's surface is covered by fresh water?" The next type is an *investigative* question, such as "What U.S. states are struggling to maintain adequate fresh water supplies?" and should be answered with contextual information from one or more sources. The best research, however, is guided by an *essential* question; one that defines the purpose of the overall investigation. An essential question is broad enough to go beyond mere fact-finding yet is specific enough to suggest some boundaries for the research. Essential questions require higher-level thinking and significant research to answer — they cannot be effectively answered by consulting just one source of information and will likely synthesize results found for several investigative questions. The essential question often personalizes the quest; "If I wish to live in a state with plentiful clean water supplies, which state do I choose and why?" The results of the research may render different "correct" answers for different students, based on their individual perspectives and preferences. Developing an essential question is a higher order thinking skill, which for beginners may present a significant challenge. Like any skill, it will become easier with frequent practice.



Featured Tool: *Webnote*—**http://www.aypwip/webnote**
Introducing the development of essential questions through small group work is a good starting point, and it can be enhanced through the use of Web 2.0 tools. *Webnote* is a simple Web 2.0 tool for posting notes on the screen. This tool allows groups of students to brainstorm ideas for research, capture the collective background knowledge of a topic, and/or refine investigative and essential questions. Information can be added and saved to the *Webnote* page at any time from any computer with web access.

Other Web 2.0 Tools to Consider:

Voxopop — A simple, and very easy-to-use tool for collaborative podcasting. A discussion on a topic can be setup and then exported to iTunes or as a RSS feed to notify you and students of additions to the discussion. At **www.voxopop.com**

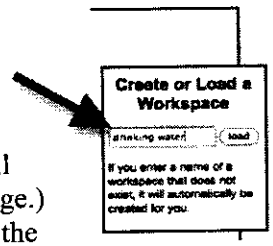
Imagination Cubed — This collaborative interactive whiteboard, designed by General Electric, is simple to use. Tools allow you to create visual using words, shapes, stamps, lines and background colors. Results can be shared instantly via email or instant messaging. At **www.imaginationcubed.com**

Using Moodle? The activity module ***Forum*** provides opportunities for students to share ideas virtually in a safe environment.

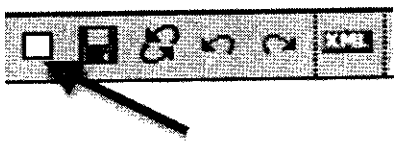
Webnote

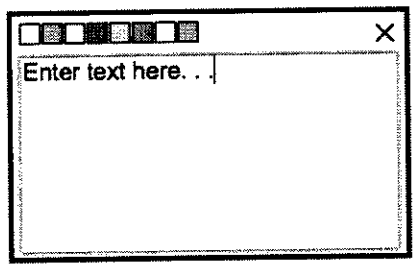
A Getting Started Tip Sheet

Webnote — www.aypwip.org/webnote



Webnote provides a space for keeping notes on the computer. Begin on the homepage by creating a workspace. Providing a name for the new space accomplishes this. (If you type a name for a space that already exists, that page will appear, whether or not you were the author, so keep trying until you get a blank page.) Once a blank page appears, virtual sticky notes can be easily added by clicking on the yellow box icon at the left side of the tool button bar to at the top left of the window displayed. Double-click on the sticky note to enter text or change the note's color.

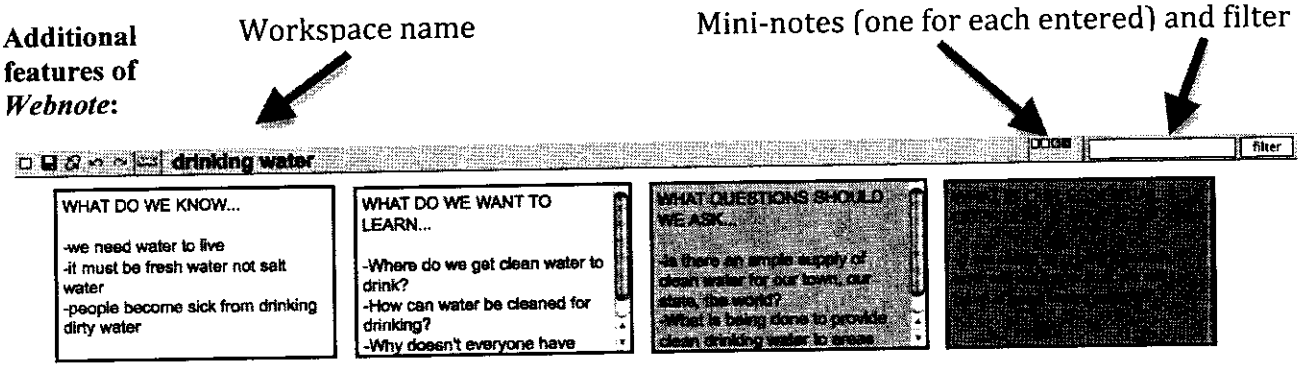




Notes can be organized in several ways. Add notes to use as headings and move them to the top of the page. Choose from among eight colors for the notes to classify information or identify individuals of a group who are posting to the same page. In addition, the notes can be arranged and rearranged easily to sort information or reveal patterns. Use the filter (top right side of screen) to search for and bring forward those notes that contain a particular word or phrase.

The workspace can be saved at any time and returned to from any Internet browser by typing the space name (case sensitive). Share the space with others by providing the name of the workspace or the page URL. *Webnote* supports collaboration allowing several users to add or edit notes simultaneously. However, be sure to save the workspace after each entry or edit is complete.

Additional features of *Webnote*:



- Use keyboard shortcuts to bring notes forward.
- Resize notes by using the left mouse button.
- Enter html code in the note to add weblinks, or embed images.
- Change a sticky note's color by hovering over it with a mouse and typing a number from 1 to 8.

Evaluating the process. . .

Research Step One: What is the Question?

Student Name: _____ Project Name or Date: _____

Description: Research Step One (possible 3 pts.)	**Reflection:** Research Step One (possible 3 pts.)
My Research Log: What is the Question? **What I did to build a question:** (make a list, provide details)	**How I did in building my question:** ☐ Better than I thought I would ☐ Just okay ☐ Not so great **My reflection on building a question:** I was pleased that I could. . . I wish I had. . . Working with others helped me to. . . Problems along the way included. . .
Evaluation: of the Web 2.0 tool used (possible 3 pts.)	
Did the WebNote tool help? ☐ Yes, definitely ☐ It helped some ☐ It didn't help, or got in the way **Why or Why not?**	

Download a reproducible or "tab & type" form for assessment use from **www.lmcsource.com/painless**

Group Reflection on using the Web 2.0 Tool

After everyone has individually reflected about use of the Web 2.0 tool, the whole class or group discusses the process and develops an improved plan for working with the tool.

- ✓ How did we use the **Webnote** tool?
- ✓ Did it help us develop a good question?
- ✓ Why do we think so or not?
- ✓ Is there a better way to use this tool?
- ✓ Is there another tool that might work better?

Student Performance Rubric: Teacher/Librarian uses this rubric to assess student's self-assessment & reflection (9 points possible)

Student Performance Rubric	Description of the Process	Reflection on the Process	Evaluation of WebNote
	Points awarded _____	Points awarded _____	Points awarded _____
0 = Missing	The student did not describe or only provided scant information about the process used.	The student did not respond or provided only scant information in the reflection.	The student did not attempt the Web tool evaluation.
1 = Beginner	The student provided a very brief description of the process used.	The student answered a few of the prompts and provided little or no evidence to support his/her opinion.	The student completed the checkbox potion but provided no refection.
2 = Making Progress	The student provided an adequate description of the process used.	The student answered some of the prompts and provided thin evidence to support his/her opinion.	The student completed the checkbox portion and provided minimal evidence.
3 = Excellent	The student provided a detailed explanation of the process used.	The student answered all prompts and provided evidence to support his/her opinion.	The student completed the checkbox portion and provided detailed evidence.

21st Century Learners Rubric: Teacher or Librarian assessment of student skills (12 points possible)

Teacher rating	21st Century Skill: Build Background	21st Century Skill: Ask Questions	Personal Habit: Inquisitiveness	Reflection
From 21st Century Skills Documents	Build background knowledge	Ask questions	Personal habits used by independent learners to do research and solve problems	Ability to think deeply about one's own learning
Specifics related to Step 1: "What is the Question?"	Does the student use background knowledge to create a foundation for new learning?	Is the student skilled in developing questions to guide their work?	Does the student display curiosity that sparks questions about his/her world?	Is student able to review, reflect and evaluate his/her own progress?
0 = Missing		Student does not develop any questions.	Student does not contribute to the group process.	Student fails to complete a "Self Assessment" for this step.
1 = Beginner	Student contributes a few ideas and information about the topic.	Student needs priming to begin to formulate questions for research.		
2 = Making Progress			Student can build on the groups' brainstorming and contribute to the notes.	Student completed the "Self Assessment" for this step.
3 = Excellent	Student uses background knowledge to develop research plan.	Student develops essential questions that require in-depth research and higher level thinking.		Student demonstrates the ability to think deeply his/her own learning

Download a reproducible or "tab & type" form for rubric development from **www.lmcsource.com/painless**

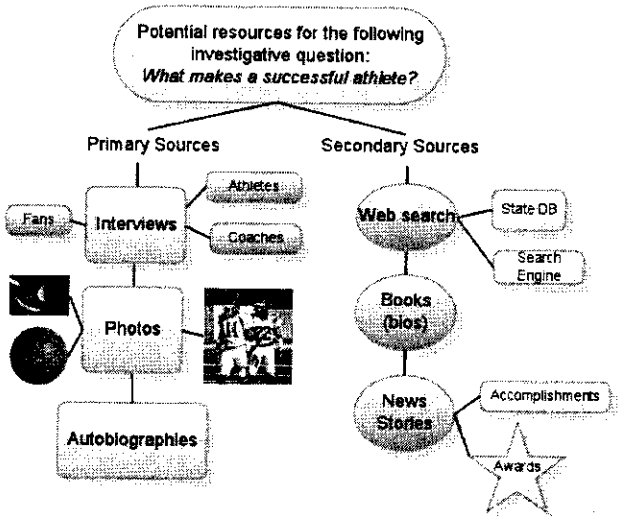
Chapter 2:
Research Step Two: What Resources Should I Use?

21st Century Skills: Find resources **Personal Habits:** Openness, inquisitiveness

Once students have identified topics and crafted essential questions, it is time for them to identify potential resources. Though we often start by providing young researchers with a list of resources or even prescribing specific URLs to use, it is important that we quickly wean them to self-reliance in this area. Be sure to model use of both primary and secondary sources of information (people, places, things, books, periodicals, images, video, etc.) so they will think of all the possibilities when they are conducting independent research. Emphasize that information resides in materials found at home, in the classroom, in the school or other libraries as well as in the community and on the worldwide web. Variety as well as quantity of resource types and perspectives should yield a balanced and complete set of findings for any research project.

Develop and use tools that help students map or graphically portray the scope of resources available for their topics. This visual map can help them organize and track their search for appropriate information. Also be sure to assign value to this step of the research process by assessing the student researcher's ability to independently identify potential sources of information for any research question.

Featured Tool: *Gliffy* — **http://www.gliffy.com**



Gliffy is a Web 2.0 graphic organizer that supports collaborative creation of mind maps, flow charts and other diagrams. One user sets up a new document then elects to share it with others to work together on building the graphic web content. Users can add shapes, adjust colors, text and even add images to create a visual map of a search plan. With each change, the file should be saved. Once complete, the image may be exported or printed for use as evidence of this stage of the research process.

Try using *Gliffy* to support other steps of the research process or as an alternate way to report what is learned as a final product.

Other Web 2.0 Tools to Consider:

Airset — A free collection of applications hat can be used at many stages of the research process: calendar, blog, lists, albums, messaging, web site, wiki and more. At **http://www.airset.com**

Zoho — A collection of free, online productivity tools that support collaboration. Includes a word processor, database, spreadsheet, wiki, conferencing and more. Using "Create" students can develop a form for keeping track of resources. At **http://creator.zoho.com**

Using Moodle?—Students can add web links of recommended resources for others to examine.

Gliffy

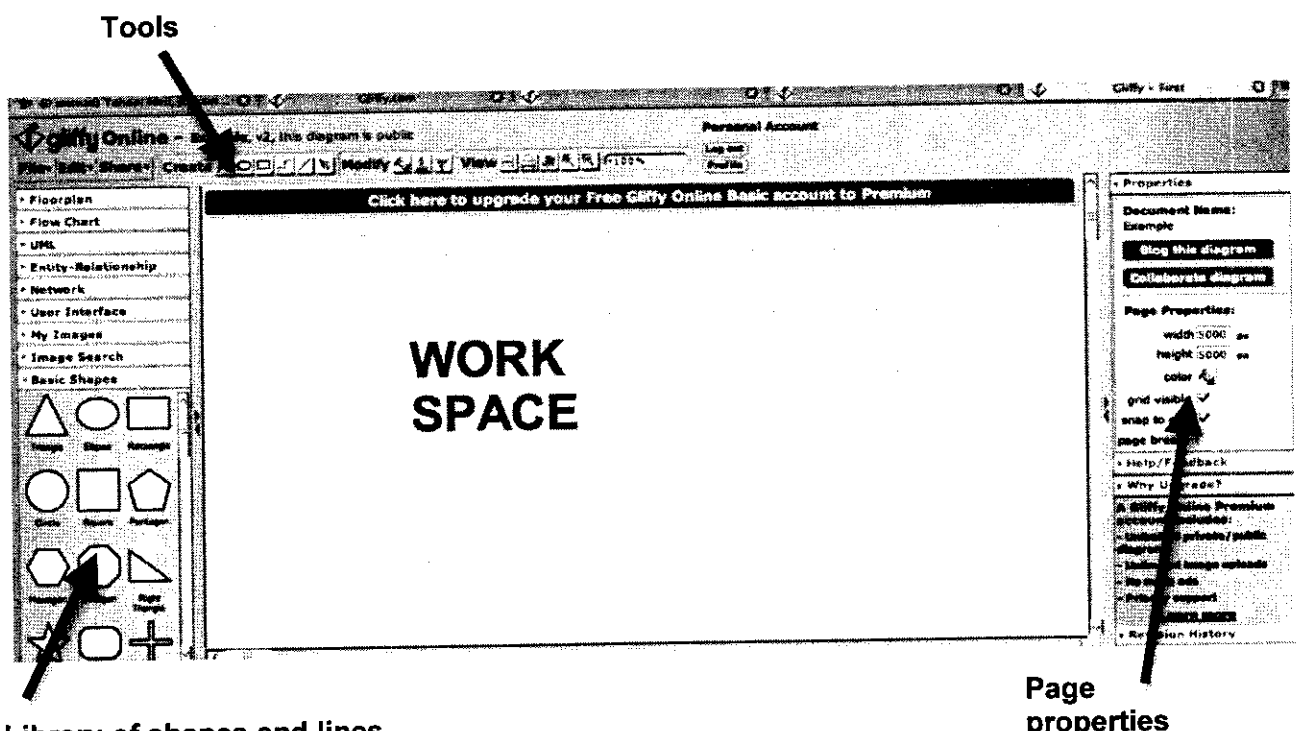
A Getting Started Tip Sheet

Gliffy — www.gliffy.com

Gliffy is a tool that makes organizing thoughts and ideas simple. With *Gliffy* you can draw, share and edit flow charts, diagrams, floor plans and technical drawings. Because *Gliffy* is web-based, you are able to publish and collaborate with others to create documents. To begin, sign up for a free *Gliffy* Basic account, which allows the user to create up to five public documents or read-only versions of the diagrams that anyone on the Internet can access. You will then be asked to name your first document. A library of shapes allows you to drag-and-drop items to create your document. Drag shapes from the library onto the page, push them around, link them with connecting lines and just click to change colors, add text, and format.

Features:

- Change colors, add text, and format with one click
- Embed your document into presentations, web pages, wikis, blogs and other applications
- Collaborate across time, distance, computing platforms
- Automatically invite others to collaborate using email addresses
- Protect and track changes made by your collaborators
- Import your own images, logos and backgrounds to complement your diagrams
- Print your document



Evaluating the process. . .

Research Step Two: What Resources Should I Use?

Student Name: _____ Project Name or Date: _____

Description: Research Step Two (possible 3 pts.)	**Reflection:** Research Step Two (possible 3 pts.)
My Research Log: What Resources Should I Use? **What I did to identify resources:** (make a list, provide details)	**How I did in identifying potential resources:** ☐ Better than I thought I would ☐ Just okay ☐ Not so great **My reflection identifying potential resources:** I was pleased that I could. . . I wish I had. . . Working with others helped me to. . . Problems along the way included. . .
Evaluation: of the Web 2.0 tool used (possible 3 pts.)	
Did the Gliffy tool help? ☐ Yes, definitely ☐ It helped some ☐ It didn't help, or got in the way **Why or Why not?**	

Download a reproducible or "tab & type" form for assessment use from **www.lmcsource.com/painless**

Group Reflection on using the Web 2.0 Tool

After everyone has individually reflected about use of the Web 2.0 tool, the whole class or group discusses the process and develops an improved plan for working with the tool.

- ✓ How did we use the **Gliffy** tool?
- ✓ Did it help us develop a potential resource list?
- ✓ Why do we think so or not?
- ✓ Is there a better way to use this tool?
- ✓ Is there another tool that might work better?

Student Performance Rubric: Teacher/Librarian uses this rubric to assess student's self-assessment & reflection (9 points possible)

Student Performance Rubric	Description of the Process	Reflection on the Process	Evaluation of Gliffy
	Points awarded _____	Points awarded _____	Points awarded _____
0 = Missing	The student did not describe or only provided scant information about the process used.	The student did not respond or provided only scant information in the reflection.	The student did not attempt the Web tool evaluation.
1 = Beginner	The student provided a very brief description of the process used.	The student answered a few of the prompts and provided little or no evidence to support his/her opinion.	The student completed the checkbox portion but provided no refection.
2 = Making Progress	The student provided an adequate description of the process used.	The student answered some of the prompts and provided thin evidence to support his/her opinion.	The student completed the checkbox portion and provided minimal evidence.
3 = Excellent	The student provided a detailed explanation of the process used.	The student answered all prompts and provided evidence to support his/her opinion.	The student completed the checkbox portion and provided detailed evidence.

21st Century Skills Rubric: Teacher or Librarian assessment of student skills (12 points possible)

Teacher rating	21st Century Skill: Find resources	Personal Habit: Openness	Personal Habit: Inquisitiveness	Reflection
From 21st Century Skills Documents	Identifying Resources	Openness to a wide variety of resources from a wide variety of information sources in the local community and beyond	Personal habits used by independent learners to do research and solve problems	Ability to think deeply about one's own learning
Specifics related to Step 2: "What Resources Should I Use?"	Is the student skilled in identifying resources to use?	Does the student display openness to seek information resources?	Is there sufficient motivation and wondering to support the finding task?	Is student able to review, reflect and evaluate his/her own progress?
0 = Missing				Student fails to complete a "Self Assessment" for this step.
1 = Beginner		Student needs priming to begin to think about potential sources of information.	Motivation and wondering minimal and needs support	
2 = Making Progress				Student completed the "Self Assessment" for this step.
3 = Excellent	The student develops a comprehensive list of resources to tap from both primary and secondary sources.	Student automatically considers resources beyond what is immediately at hand.	Students demonstrate excitement about wanting to discover potential resources	Student demonstrates the ability to think deeply his/her own learning

Download a reproducible or "tab & type" form for rubric development from **www.lmcsource.com/painless**

Chapter 3
Research Step Three: How Do I Find the Information?

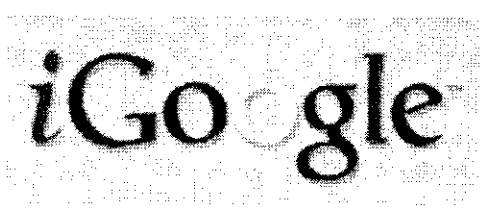
21st Century Skills: Identify resources, locate, and gather quality information
Personal Habits: Initiative

Students must develop both "thoughtful" and "technical" skills to be successful at finding information. Certainly, this is where "library skills" are put to good use in seeking appropriate print and online resources. Scanning, reading for information, and reading comprehension skills are a must. Listening and speaking skills smooth the way to successful interviews. In today's information society, a researcher's ability to use online search engines to find, expand, and narrow searches is paramount.

As with other skill development, the teacher or librarian can help by providing scaffolding lessons to develop and sharpen both literacy and technical skills. It is also useful to provide or recommend tools to help student researchers find and manage information sources. Since the goal is to create self-reliant, independent researchers, it makes sense to encourage students to create their own custom search and information portals.

Featured Tool: *iGoogle* — **http://www.google.com/ig**

Crafted as a personal information portal, *iGoogle* has become a popular Web 2.0 tool for researchers of all ages. Each researcher sets up a page with customized gadgets to seek information on specific topics or interests that automatically feed to the page. Add note pads, todo lists, calendars and more to keep track of the process and stick to a planned schedule. Set up multiple pages on *iGoogle* to manage several simultaneous research investigations.



Accessible from school (if not blocked by school web filters) or home computers, *iGoogle* provides an easy-to-set up and easy to manage custom web portal for student researchers.

Other Web 2.0 Tools to Consider:

Skype — A free way to conduct voice-based interviews and conversations between computers. Sign up for an account and then place a call to another computer or, for a small additional charge, to a person's voice line. At **www.skype.com**

Survey Monkey — A free online survey tool. Create a custom survey then extend the invitation via email or distributing a URL link to targeted audiences. At **www.surveymonkey.com**

Using Moodle? — Add and use the ***Questionnaire*** module to develop and manage surveys for various target audiences.

iGoogle

A Getting Started Tip Sheet

iGoogle — www.google.com/ig

It takes less than a minute to set up an *iGoogle* home page. Select options from the set up page then click "see your page" button.

Once the page is up, and based upon the options selected, several gadgets appear on the page (mini-windows). Each may be minimized, maximized or deleted with just one click. Move them around by pushing them while pointing at the top of the gadget frame.

Click the link to "Customize this page" to add choices from hundreds of banners and gadgets from note taking tools, RSS feeds, utilities and more. While it only takes a few seconds to set up a page, one could spend hours exploring all the options to put on this personal "information central" website.

Add additional pages by clicking "Add a tab." Many gadgets can be edited or customized to meet specific needs.

Evaluating the process. . .

Research Step Three: How Do I Find the Information?

Student Name: _____ Project Name or Date: _____

Description: Research Step Three (possible 3 pts.)	**Reflection:** Research Step Three (possible 3 pts.)
My Research Log: How Do I Find the Information? **What I did to find information:** (make a list, provide details)	**How I did in finding information:** ☐ Better than I thought I would ☐ Just okay ☐ Not so great **My reflection on finding information:** I was pleased that I could. . . I wish I had. . . Working with others helped me to. . . Problems along the way included. . .
Evaluation: of the Web 2.0 tool used (possible 3 pts.)	
Did the iGoogle tool help? ☐ Yes, definitely ☐ It helped some ☐ It didn't help, or got in the way **Why or Why not?**	

Download a reproducible or "tab & type" form for assessment use from **www.lmcsource.com/painless**

Group Reflection on using the Web 2.0 Tool

After everyone has individually reflected about use of the Web 2.0 tool, the whole class or group discusses the process and develops an improved plan for working with the tool.

- ✓ How did we use the **iGoogle** tool?
- ✓ Did it help us find information needed?
- ✓ Why do we think so or not?
- ✓ Is there a better way to use this tool?
- ✓ Is there another tool that might work better?

Student Performance Rubric: Teacher/Librarian uses this rubric to assess student's self-assessment & reflection (9 points possible)

Student Performance Rubric	**Description** of the Process	**Reflection** on the Process	**Evaluation** of iGoogle
	Points awarded _____	Points awarded _____	Points awarded _____
0 = Missing	The student did not describe or only provided scant information about the process used.	The student did not respond or provided only scant information in the reflection.	The student did not attempt the Web tool evaluation.
1 = Beginner	The student provided a very brief description of the process used.	The student answered a few of the prompts and provided little or no evidence to support his/her opinion.	The student completed the checkbox potion but provided no refection.
2 = Making Progress	The student provided an adequate description of the process used.	The student answered some of the prompts and provided thin evidence to support his/her opinion.	The student completed the checkbox portion and provided minimal evidence.
3 = Excellent	The student provided a detailed explanation of the process used.	The student answered all prompts and provided evidence to support his/her opinion.	The student completed the checkbox portion and provided detailed evidence.

21st Century Skills Rubric: Teacher or Librarian assessment of student skills (9 points possible)

Teacher rating	**21st Century Skill: Identify, Locate, & Gather Information**	**Personal Habit: Initiative**	**Reflection**
From 21st Century Skills Documents	Identify resources, locate, and gather quality information	Personal habits used by independent learners to do research and solve problems	Ability to think deeply about one's own learning
Specifics related to Step 3: "How do I find the Information?"	Is the student skilled in finding information related to the research topic?	Does the student display determination to thoroughly investigate the topic?	Is student able to review, reflect and evaluate his/her own progress?
0 = Missing			Student fails to complete a "Self Assessment" for this step.
1 = Beginner		The student needs priming and significant help in finding information related to the topic.	
2 = Making Progress	With limited guidance, the student can use both technical skills and library skills to locate information.	The student works well independently and needs only occasional guidance.	Student completed the "Self Assessment" for this step.
3 = Excellent	The student is highly skilled at finding information related to his/her topic using both technical and library skills.		Student demonstrates the ability to think deeply about his/her own learning

Download a reproducible or "tab & type" form for rubric development from **www.lmcsource.com/painless**

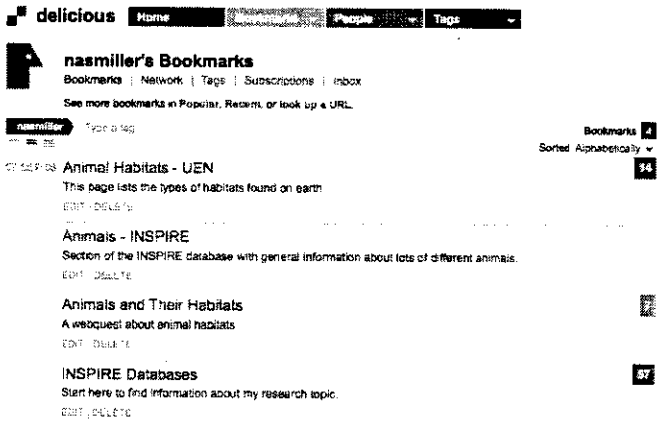
Chapter 4
Research Step Four: How Do I Gather the Information?

21st Century Skills: Identify resources, locate, and gather quality information
Personal Habits: Work

Information sources are found! The next step for researchers is to *engage* with the information by putting reading and information processing skills to use. This is the "first cut" process. View, scan, read, then decide what to capture for later review. Take notes (paraphrase!) and be sure record sources. Bookmark the web pages (URLs) where good information is found. Download documents and images, then organize them into files and folders.

There are myriad ways to help students become organizers in the research process. File folders, research notebooks, computer applications, and online tools can be set up for and by students, dependent upon their age and abilities. Mini-lessons or guide sheets might be created to help students perform technical tasks associated with capture and organization of materials. Web 2.0 tools can be effectively used to manage groups, collaborate and capture information as well as to share sources, notes and findings with others.

Featured Tool: *Delicious* — **http://delicious.com**



Two of the most frequent challenges for students when doing online research are 1) to find quality web resources, and 2) to remember "where" they found "what" information. *Delicious* can help meet both of these challenges. The teacher or school librarian might set up a helpful list of online resources for students to use in research projects which can then be shared with the students. (Alternatively, students can add this shared list to their own *iGoogle* web portal through an RSS feed.) Addressing the second challenge, student researchers can set up their own Del.icio.us accounts and add the URL bookmarks for the sites they discover during research. Each URL added may be annotated with notes about what the site offered toward the research quest and shared immediately with other group members.

Other Web 2.0 Tools to Consider:

Zoho Notebook — One of many Zoho tools that allow individuals to create, share and collaborate to record information on any topic in one or more online notebooks. Students can simultaneously collaborate on an entire notebook or one page. They can also collaborate by using the Chat feature. Users must set up and/or login to a Zoho account to use this application. At **http://notebook.zoho.com**

RSS Feeds — Look for the symbol at research information websites to subscribe to RSS (Really Simple Syndication) feeds to email accounts, Bloglines, My Yahoo, or iGoogle pages. New information at those sites will then be automatically fed to the subscriber.

Using Moodle? — Add and use the ***RSS*** block module to add RSS feeds from multiple sources to your Moodle course or resource web page.

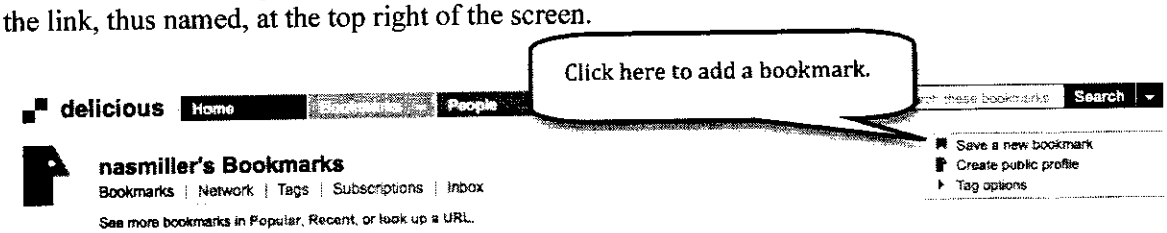
Delicious

A Getting Started Tip Sheet

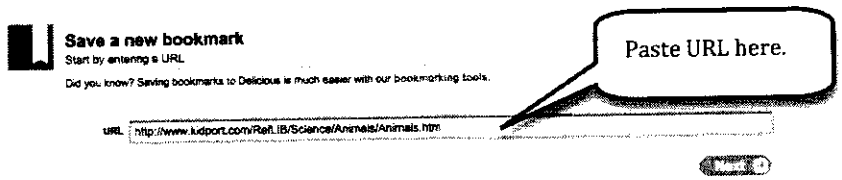
delicious — www.delicious.com

Delicious is a great, free, Web 2.0 tool for managing and sharing favorite URLs as an individual or within a group. Each user sets up an account and can then begin adding URLs and their own annotations about those sites or pages. Add other users to your network to automatically see all group members' sites. As a teacher or school librarian, set up *Delicious* accounts with quality URLs to share with students engaging in the research process. "Tags" or keywords may be added for each bookmarked site to facilitate filtering the bookmark list for specific research areas or for sending the bookmarks to other *Delicious* users or network members.

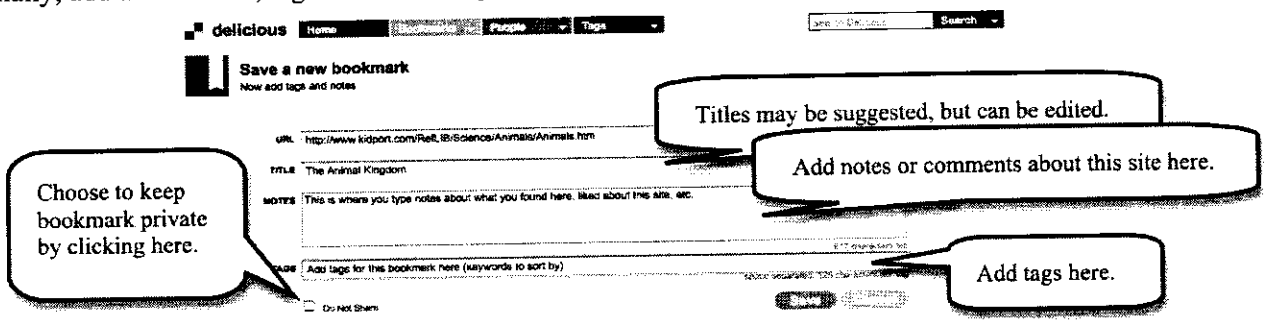
Once the account is set up, a new bookmarks page will be displayed. Save a new bookmark by clicking on the link, thus named, at the top right of the screen.



On the next screen, type or paste in the URL for the site you wish to bookmark, then click the next button.



Finally, add annotations, tags and choose options for this bookmark.



Once saved, the bookmark will be added to the main list. Brief, annotated and full information for all bookmarks may be displayed by choosing the single, double or triple line buttons displayed under the user name on the main page.

Evaluating the process. . .

Research Step Four: How Do I Gather the Information?

Student Name: _____ Project Name or Date: _____

Description: Research Step Four (possible 3 pts.)	**Reflection:** Research Step Four (possible 3 pts.)
My Research Log: How Do I Gather the Information? **What I did to gather the information:** (make a list, provide details)	**How I did in gathering information:** ☐ Better than I thought I would ☐ Just okay ☐ Not so great **My reflection on gathering information:** I was pleased that I could. . . I wish I had. . . Working with others helped me to. . . Problems along the way included. . .
Evaluation: of the Web 2.0 tool used (possible 3 pts.)	
Did the Delicious tool help? ☐ Yes, definitely ☐ It helped some ☐ It didn't help, or got in the way **Why or Why not?**	

Download a reproducible or "tab & type" form for assessment use from **www.lmcsource.com/painless**

Group Reflection on using the Web 2.0 Tool

After everyone has individually reflected about use of the Web 2.0 tool, the whole class or group discusses the process and develops an improved plan for working with the tool.

- ✓ How did we use the **Delicious** tool?
- ✓ Did it help us gather information we found?
- ✓ Why do we think so or not?
- ✓ Is there a better way to use this tool?
- ✓ Is there another tool that might work better?

Student Performance Rubric: Teacher/Librarian uses this rubric to assess student's self-assessment & reflection (9 points possible)

Student Performance Rubric	Description of the Process	Reflection on the Process	Evaluation of Delicious
	Points awarded _____	Points awarded _____	Points awarded _____
0 = Missing	The student did not describe or only provided scant information about the process used.	The student did not respond or provided only scant information in the reflection.	The student did not attempt the Web tool evaluation.
1 = Beginner	The student provided a very brief description of the process used.	The student answered a few of the prompts and provided little or no evidence to support his/her opinion.	The student completed the checkbox potion but provided no refection.
2 = Making Progress	The student provided an adequate description of the process used.	The student answered some of the prompts and provided thin evidence to support his/her opinion.	The student completed the checkbox portion and provided minimal evidence.
3 = Excellent	The student provided a detailed explanation of the process used.	The student answered all prompts and provided evidence to support his/her opinion.	The student completed the checkbox portion and provided detailed evidence.

21st Century Learners Rubric: Teacher or Librarian assessment of student skills (9 points possible)

Teacher rating	21st Century Skill: Identify, Locate, & Gather Information	Personal Habit: Work	Reflection
From 21st Century Skills Documents	Identify resources, locate, and gather quality information	Personal habits used by independent learners to do research and solve problems	Ability to think deeply about one's own learning
Specifics related to Step 4: "How do I Gather the Information?"	Is the student skilled in techniques needed to gather information?	Is the student careful and conscientious when gathering information?	Is student able to review, reflect and evaluate his/her own progress?
0 = Missing	The student is not able to gather any information.		Student fails to complete a "Self Assessment" for this step.
1 = Beginner		The student captures general information about sources, but lacks detail.	
2 = Making Progress			Student completed the "Self Assessment" for this step.
3 = Excellent	The student is highly skilled in scanning, note-taking, downloading, and screen capture.		Student demonstrates the ability to think deeply about his/her own learning

Download a reproducible or "tab & type" form for rubric development from **www.lmcsource.com/painless**

Chapter 5
Research Step Five: Which Information Do I Use?

21st Century Skills: Effective use of information
Personal Habits: Ethics

It is now time to critically examine the information gathered to determine its ultimate value to your research. Ask yourself: Is the content as current as it needs to be for the questions asked?; Is it from a valid and credible source?; What is the bias of the information source?; Is the information truly pertinent to the essential question or just somewhat related to the topic? At this point you must also determine if you have too much (choose the best, discard the rest), or not enough (search for more) quality information that you can legally use for your project.

Featured Tool: — *ZOHO Wiki* http://wiki.zoho.com

ZOHO Wiki provides an online space where students can share and analyze information. One student in the group starts the wiki by creating a front page. Other students can add the information they have collected on additional pages of the wiki. Next, all students in the group can review the resources added by others and comment on the accuracy, validity and usefulness of specific resources.

Once the resources have been analyzed and accepted, the information collected can be shared in a matrix on the wiki allowing students to see patterns, make decisions, and ask new questions. Additional pages can be added to explore new ideas and answer new questions. The wiki is web based allowing students to view and edit the information at any time from any computer with Internet access. The entire class can edit a page together, create a class product, or each student can have their own wiki for initial collection of resources.

Other Web 2.0 Tools to Consider:

EasyBib – Student research groups can create, save and print APA and MLA bibliographies. At www.easybib.com

iGoogle – Research groups can create a web site to share and common on resources suggested by team members. At **www.google.com/ig**

Wikispaces – This popular site provides educators and students with the opportunity to create and edit wikis. The wikis can be seen by all but the editing feature is password protected. At www.wikispaces.com

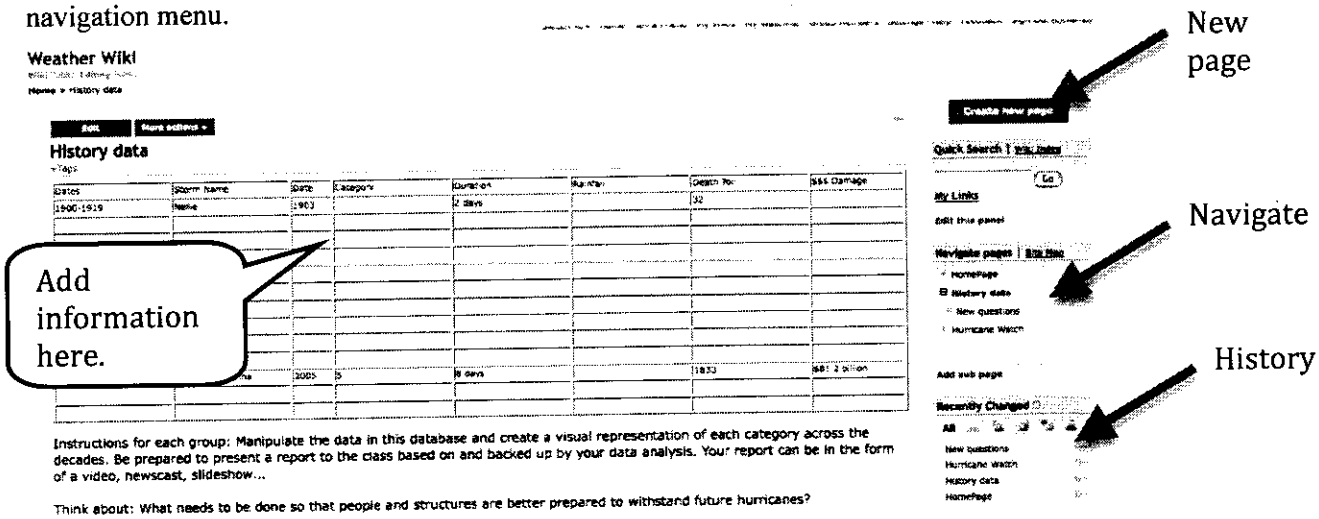
Using Moodle? The Moodle wiki provides an easy to use yet powerful tool for collaboration.

ZOHO Wiki

A Getting Started Tip Sheet

ZOHO Wiki — http://wiki.zoho.com

ZOHO Wiki provides students with an easy to use tool for creating wikis. No knowledge of a special programming language is needed to begin or add pages to the wiki. The first step is for the research group to sign up for a free ZOHO account. This provides access to all the ZOHO tools including the wiki. Buttons allow students to quickly start a new wiki and to add additional pages to a wiki. Groups can be set up so that only students in the research group and, later, in the entire class can view and edit the wiki. This assures privacy. Students select the page of the wiki they want to view or edit from a navigation menu.



Additional features of ZOHO Wiki:

- Home page contains basic wiki directions
- Ability to quickly duplicate, delete, rename and print pages
- Wiki can be organized by creating subpages for each page
- Editing tools for creation of tables, text formatting, addition of color, links and pictures

Evaluating the process. . .

Research Step Five: Which Information Do I Use?

Student Name: _____ Project Name or Date: _____

Description: Research Step Five (possible 3 pts.)	**Reflection:** Research Step Five (possible 3 pts.)
My Research Log: Which Information Do I Use? **What I did to decide which information to use:** (make a list, provide details)	**How I did in deciding which information to use:** ☐ Better than I thought I would ☐ Just okay ☐ Not so great **My reflection on deciding which information to use:** I was pleased that I could. . . I wish I had. . . Working with others helped me to. . . Problems along the way included. . .

Evaluation: of the Web 2.0 tool used (possible 3 pts.)

Did the ZOHO Wiki tool help?

- ☐ Yes, definitely
- ☐ It helped some
- ☐ It didn't help, or got in the way

Why or Why not?

Download a reproducible or "tab & type" form for assessment use from **www.lmcsource.com/painless**

Group Reflection on using the Web 2.0 Tool

After everyone has individually reflected about use of the Web 2.0 tool, the whole class or group discusses the process and develops an improved plan for working with the tool.

- ✓ How did we use the **ZOHO Wiki** tool?
- ✓ Did it help us decide which information to use?
- ✓ Why do we think so or not?
- ✓ Is there a better way to use this tool?
- ✓ Is there another tool that might work better?

Student Performance Rubric: Teacher/Librarian uses this rubric to assess student's self-assessment & reflection (9 points possible)

Student Performance Rubric	Description of the Process	Reflection on the Process	Evaluation of ZOHO Wiki
	Points awarded _____	Points awarded _____	Points awarded _____
0 = Missing	The student did not describe or only provided scant information about the process used.	The student did not respond or provided only scant information in the reflection.	The student did not attempt the Web tool evaluation.
1 = Beginner	The student provided a very brief description of the process used.	The student answered a few of the prompts and provided little or no evidence to support his/her opinion.	The student completed the checkbox potion but provided no refection.
2 = Making Progress	The student provided an adequate description of the process used.	The student answered some of the prompts and provided thin evidence to support his/her opinion.	The student completed the checkbox portion and provided minimal evidence.
3 = Excellent	The student provided a detailed explanation of the process used.	The student answered all prompts and provided evidence to support his/her opinion.	The student completed the checkbox portion and provided detailed evidence.

21st Century Learners Rubric: Teacher or Librarian assessment of student skills (9 points possible)

Teacher rating	21st Century Skill: Effectively use information	Personal Habit: Ethics	Reflection
From 21st Century Skills Documents	Effectively use information	Personal habits used by independent learners to do research and solve problems	Ability to think deeply about one's own learning
Specifics related to Step 5: "Which Information Do I Use?"	Is the student skilled in critically analyzing information to be used in his/her research findings?	Does the student respect the intellectual property of others?	Is student able to review, reflect and evaluate his/her own progress?
0 = Missing			Student fails to complete a "Self Assessment" for this step.
1 = Beginner	The student requires assistance in determining which information to use in findings.		
2 = Making Progress		The student requests permission to include information.	Student completed the "Self Assessment" for this step.
3 = Excellent	The student demonstrates highly developed skills in information analysis.	The student properly cites sources of all information used.	Student demonstrates the ability to think deeply about his/her own learning

Download a reproducible or "tab & type" form for rubric development from **www.lmcsource.com/painless**

Chapter 6
Research Step Six: How Do I Share What I Learned?

21st Century Skills: Create products, share and apply findings
Personal Habits: Confidence

This is the stage of the research where the product for sharing the findings is created. No research project is complete without communicating what was learned with one or more target audiences. Product choices for sharing might range from the traditional paper report to a more informal poster or mind-map illustration. A multimedia presentation might stand alone or accompany a speech. With readily available computer open-source and Web 2.0 applications, products such as audio and video podcasts may best suit this sharing purpose. In all cases, it is important that researchers synthesize, not simply regurgitate what is discovered through research; rewriting notes taken in their own words. When appropriate, they also include direct quotes that are accurately transcribed and correctly cited.

As with previous research model steps, both technical and literacy skills are required. Teachers and school librarians should take care to set parameters for product development that balance students' needs for creative license, with their equally demanding need for boundaries and clear expectations. It is all too easy for enthusiastic young researchers to get caught up in creating the "glitz" and "bling" effects afforded by new technologies, but at the expense of quality content in their final product. Explicit guidelines or a shared assessment rubric at the beginning of the research and project development period will go a long way toward fixing the "fluff" challenge.

Featured Tool: *Voxopop* — **http://www.voxopop.com**

Podcasting is a fun new way to share information on any topic. Creating audio podcasts has never been easier than using *Voxopop* from a computer with an attached or built-in microphone. Designed as a Web 2.0 audio discussion site, the podcast reports can be grouped in a single "research report discussion" and any may be exported to iTunes. Podcasts may be used for informal reporting and discussions among research team members along the way, or to record a more formal speech that is read from a written report outline or paper.

Other Web 2.0 Tools to Consider:

Other podcasting tools include: **Voki, Voicethread, Audacity, PodOMatic**, and **Gcast** Other presentation software like PowerPoint or Keynote: **Google Presentations, Slideshare, Screencast, Freesound, Freeplay Music, Sounddogs, Mixwit, Author Stream,** and **Jing**

Google Docs — One of many Google apps that allow collaborative input. This is basically an online word processing document that one user may begin, then invite others to collaboratively edit.

Google Spreadsheet — This Web 2.0 application allow for collaborative posting of data. The tool now supports chart and graph creation. This is perfect for communicating numerical results from research findings.

Using Moodle? — Create and add prepared podcast files as resources or install and use the ***Podcast*** module.

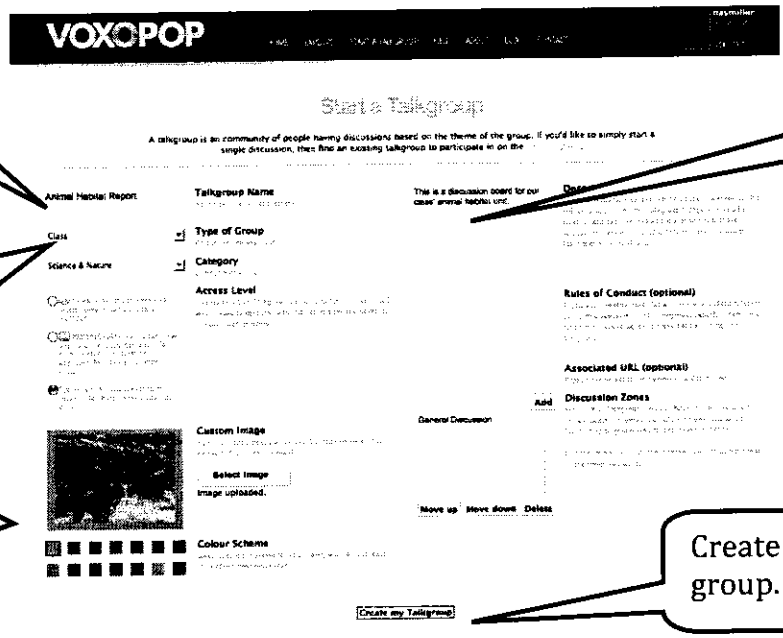
Voxopop

A Getting Started Tip Sheet

Voxopop— www.voxopop.com

Voxopop users must each have an account. Once logged in the user may join a talk group or create a new one.

Once logged in, click the top right area on the home page to "Create a new Talkgroup." The next page will appear thus:



Give your talk group a name.

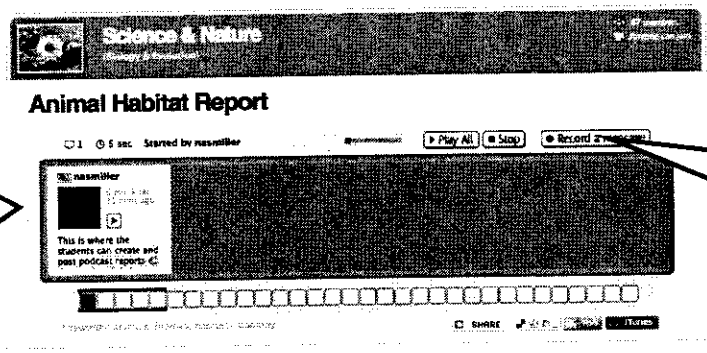
Enter a description

Choose a group type and category.

Upload an image and choose a color scheme.

Create your group.

On the next page record an introductory message. Have students log in and listen to your introduction, but then create new podcasts for their own reports of research findings.



Each podcast will identify the author.

Record a new message.

Evaluating the process. . .

Research Step Six: How Do I Share What I Learned?

Student Name: _____ Project Name or Date: _____

Description: Research Step Six (possible 3 pts.)	**Reflection:** Research Step Six (possible 3 pts.)
My Research Log: How Do I Share What I Learned? **What I did to share what I learned:** (make a list, provide details)	**How I did in sharing what I learned:** ☐ Better than I thought I would ☐ Just okay ☐ Not so great **My reflection on sharing what I learned:** I was pleased that I could. . . I wish I had. . . Working with others helped me to. . . Problems along the way included. . .
Evaluation: of the Web 2.0 tool used (possible 3 pts.)	
Did the Voxopop tool help? ☐ Yes, definitely ☐ It helped some ☐ It didn't help, or got in the way **Why or Why not?**	

Download a reproducible or "tab & type" form for assessment use from **www.lmcsource.com/painless**

Group Reflection on using the Web 2.0 Tool

After everyone has individually reflected about use of the Web 2.0 tool, the whole class or group discusses the process and develops an improved plan for working with the tool.

- ✓ How did we use the **Voxopop** tool?
- ✓ Did it help us share what we learned?
- ✓ Why do we think so or not?
- ✓ Is there a better way to use this tool?
- ✓ Is there another tool that might work better?

Student Performance Rubric: Teacher/Librarian uses this rubric to assess student's self-assessment & reflection (9 points possible)

Student Performance Rubric	Description of the Process	Reflection on the Process	Evaluation of Voxopop
	Points awarded _____	Points awarded _____	Points awarded _____
0 = Missing	The student did not describe or only provided scant information about the process used.	The student did not respond or provided only scant information in the reflection.	The student did not attempt the Web tool evaluation.
1 = Beginner	The student provided a very brief description of the process used.	The student answered a few of the prompts and provided little or no evidence to support his/her opinion.	The student completed the checkbox potion but provided no refection.
2 = Making Progress	The student provided an adequate description of the process used.	The student answered some of the prompts and provided thin evidence to support his/her opinion.	The student completed the checkbox portion and provided minimal evidence.
3 = Excellent	The student provided a detailed explanation of the process used.	The student answered all prompts and provided evidence to support his/her opinion.	The student completed the checkbox portion and provided detailed evidence.

21st Century Learners Rubric: Teacher or Librarian assessment of student skills (9 points possible)

Teacher rating	21st Century Skill: Create products, share and apply findings	Personal Habit: Confidence	Reflection
From 21st Century Skills Documents	Create products, share and apply findings	Personal habits used by independent learners to do research and solve problems	Ability to think deeply about one's own learning
Specifics related to Step 6: "How Do I Share What I Learned?"	Is the student skilled in presenting what was learned in print, media or oral presentation?	Can the student communicate clearly with the intended audience?	Is student able to review, reflect and evaluate his/her own progress?
0 = Missing			Student fails to complete a "Self Assessment" for this step.
1 = Beginner		The student needs help in preparing a presentation for his/her intended audience.	
2 = Making Progress			Student completed the "Self Assessment" for this step.
3 = Excellent	The student prepared and presented a compelling presentation of what was learned in his/her research.		Student demonstrates the ability to think deeply about his/her own learning

Download a reproducible or "tab & type" form for rubric development from **www.lmcsource.com/painless**

Chapter 7
Research Step Seven: How Do I Evaluate My Work?

21st Century Skills: Reflect on (Evaluate) content and process
Personal Habits: Responsibility

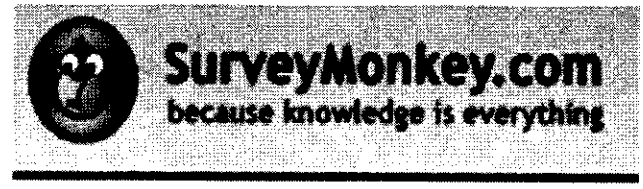
The evaluation stage of research should address both process and product. To judge the process, students should ask: Was my research process thorough?; Was my research process efficient?; How could I make it more thorough. . . more efficient?; Did I use a variety of appropriate primary and secondary sources?

The product can be assessed according to assignment guidelines or a pre-established rubric, addressing such questions as: Is my product effective in answering the question?; Is it appropriate for the target audience?; Is it informative, persuasive, creative, entertaining?; Is my conclusion supported well by the evidence presented?; and, Has my information been attributed correctly?

Learners can be evaluated at any stage of the research process. For example, they may be evaluated in their skill at finding relevant information using a search engine or searching tool in a statewide database. When an entire research model such as the Savvy 7 or Big 6 is used, rubrics can be setup at each one of the six or seven steps to assess student success at that level.

Providing students with the opportunity to reflect on both the research product and process will result in a deeper understanding of both and, hopefully, elevate the student's work on future projects.

Featured Tool: — *Survey Monkey* - http://www.surveymonkey.com



Survey Monkey is a free, easy to use online tool that will allow you and your students to create assessments at all levels of the research process. One example is to ask students to add questions to an assessment survey before beginning the research project. You can create the survey and provide each student with the URL and survey name. Using this tool, each student would add at least one question to the survey. Encourage students to ask questions about both the final product and the process. When all students have completed the research project, the entire class will take the assessment survey.

Other Web 2.0 Tools to Consider:

Dipity – Using this timeline tool students can keep a log of their research process. All students in a project group can add and make comments about events and sources. At **http://www.dipity.com**

Gliffy - Students can create a flowchart showing the process they used to conduct their research. At **http://www.gliffy.com/**

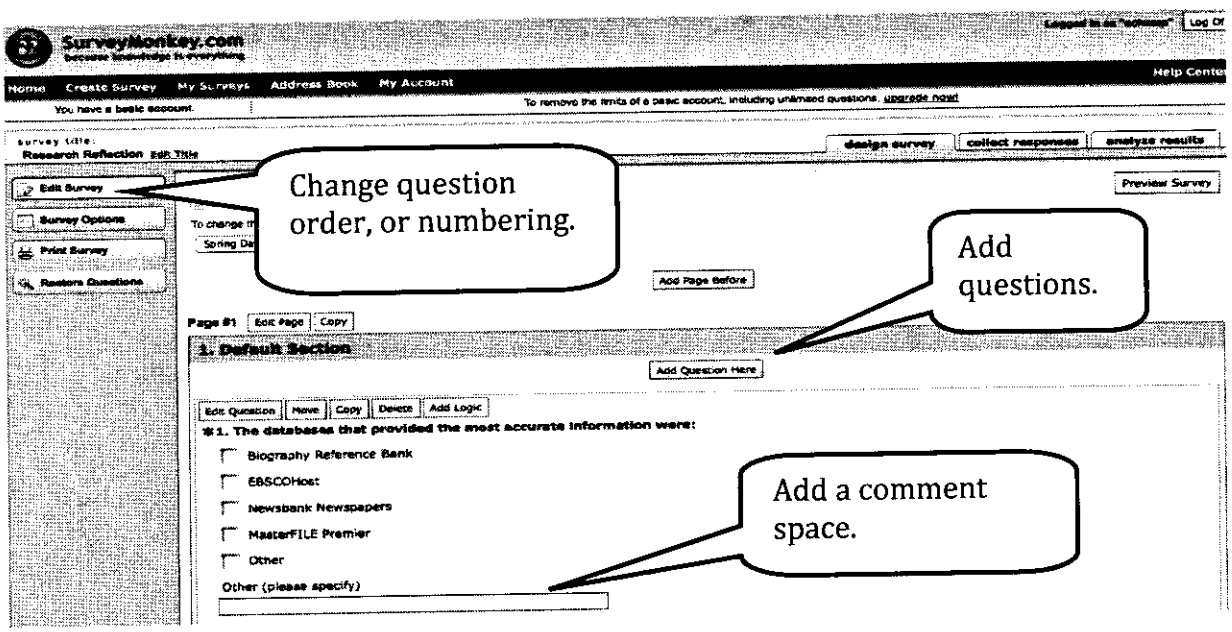
Using Moodle? The Moodle workshop activity module provides a process for teachers and students to give feedback on open-ended assignments such as research papers. Using this module, it is easy for students to upload files, assess their own work, and review and provide feedback on other students' work. Teachers can monitor students' progress, provide feedback on work-in-progress, and grade final work providing an easy to use yet powerful tool for collaboration.

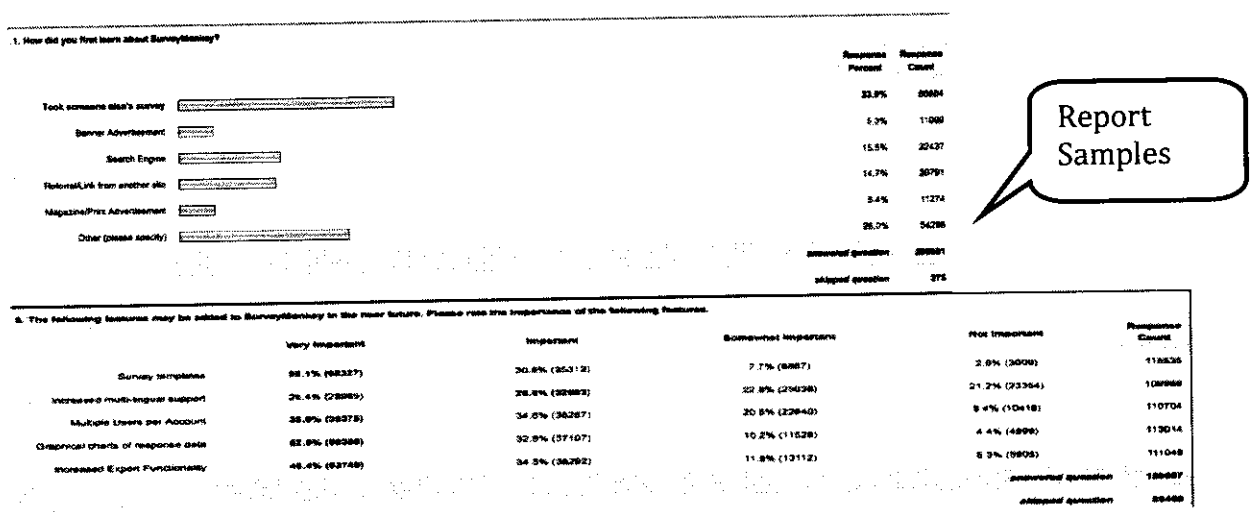
Survey Monkey

A Getting Started Tip Sheet

Survey Monkey — http://www.surveymonkey.com

When you sign up for a free, basic subscription to *Survey Money* you can create surveys with up to 100 responses. Twenty different types of questions can be included on surveys including: multiple choice, rating, image, essay, date/time, and numerical. A comment field allows for a brief explanation about an answer. Survey creators have the ability to edit and change the question content and type. The survey cannot be printed in the Basic account but you can preview the survey and then use cut and paste to a word processor and then print. A powerful reporting tool provides live charts and graphs of all responses. You can also view responses by individual.





Evaluating the process. . .

Research Step Seven: How Do I Evaluate My Work?

Student Name: _____ Project Name or Date: _____

Description: Research Step Seven (possible 3 pts.)	**Reflection:** Research Step Seven (possible 3 pts.)
My Research Log: How Do I Evaluate My Work? **What I did to evaluate my work:** (make a list, provide details)	**How I did evaluating my work:** ☐ Better than I thought I would ☐ Just okay ☐ Not so great **My reflection on evaluating my work:** I was pleased that I could. . . I wish I had. . . Working with others helped me to. . . Problems along the way included. . .
Evaluation: of the Web 2.0 tool used (possible 3 pts.)	
Did the Survey Monkey tool help? ☐ Yes, definitely ☐ It helped some ☐ It didn't help, or got in the way **Why or Why not?**	

Download a reproducible or "tab & type" form for assessment use from **www.lmcsource.com/painless**

Group Reflection on using the Web 2.0 Tool

After everyone has individually reflected about use of the Web 2.0 tool, the whole class or group discusses the process and develops an improved plan for working with the tool.

- ✓ How did we use the **Survey Monkey** tool?
- ✓ Did it help us evaluate our work?
- ✓ Why do we think so or not?
- ✓ Is there a better way to use this tool?
- ✓ Is there another tool that might work better?

Student Performance Rubric: Teacher/Librarian uses this rubric to assess student's self-assessment & reflection (9 points possible)

Student Performance Rubric	**Description** of the Process	**Reflection** on the Process	**Evaluation** of Survey Monkey
	Points awarded _____	Points awarded _____	Points awarded _____
0 = Missing	The student did not describe or only provided scant information about the process used.	The student did not respond or provided only scant information in the reflection.	The student did not attempt the Web tool evaluation.
1 = Beginner	The student provided a very brief description of the process used.	The student answered a few of the prompts and provided little or no evidence to support his/her opinion.	The student completed the checkbox potion but provided no refection.
2 = Making Progress	The student provided an adequate description of the process used.	The student answered some of the prompts and provided thin evidence to support his/her opinion.	The student completed the checkbox portion and provided minimal evidence.
3 = Excellent	The student provided a detailed explanation of the process used.	The student answered all prompts and provided evidence to support his/her opinion.	The student completed the checkbox portion and provided detailed evidence.

21st Century Learners Rubric: Teacher or Librarian assessment of student skills (9 points possible)

Teacher rating	**21st Century Skill: Reflect/Evaluate**	**Personal Habit: Responsibility**	**Reflection**
From 21st Century Skills Documents	Reflect on (evaluate) content and process	Personal habits used by independent learners to do research and solve problems	Ability to think deeply about one's own learning
Specifics related to Step 7: "How Do I Evaluate My Work?"	Is the student skilled at objectively evaluating his/her work, both process & product of the investigation?	Is the student thorough in both developing the product and reviewing the process to ensure quality results?	Is student able to review, reflect and evaluate his/her own progress?
0 = Missing		The student missed project deadlines and did not recognize his/her shortcomings in performing the work.	Student fails to complete a "Self Assessment" for this step.
1 = Beginner	The student reviewed work and was able to point out one or two qualities of product or process.		
2 = Making Progress		The student is reasonably thorough in evaluating product/process of research.	Student completed the "Self Assessment" for this step.
3 = Excellent	The student can build a quality rubric to evaluate his/her own work.		Student demonstrates the ability to think deeply about his/her own learning

Download a reproducible or "tab & type" form for rubric development from **www.lmcsource.com/painless**

Chapter 8
Explore Web 2.0 on Your Own

How do folks even try to keep up with the thousands of possible Web 2.0 applications already in existence, let alone the new ones that appear regularly? Here are a few websites of professionals who try to do that. We also recommend networking at conferences and locally. Everyone seems to have a favorite to share.

Library Media Specialist 2.0: Social, Collaborative, and Interactive Technologies: http://www.eduscapes.com/sessions/slms2/ —Designed by Annette Lamb and Larry Johnson, this collection of links encourages exploration of 2.0 technologies.

Webtools4U2Use: http://webtools4u2use.wikispaces.com — Collection of Web 2.0 tools that includes an explanation of the tool along with examples of how the tool can be used in school libraries. Excellent ideas and many tools grouped by type, such as "Audio & Podcasting," "Blogs," and "Quiz and Polling Tools."

Centre for Learning & Performance Technologies:
http://www.c4lpt.co.uk/index.html— Jane Hart's page contains a comprehensive list of Web 2.0 technologies for teaching and learning.

Go2WEB20: http://www.go2web20.net/ —A Web 2.0 directory organized using the logos of over 2,700 Web 2.0 tools.

Notes on your own favorites:

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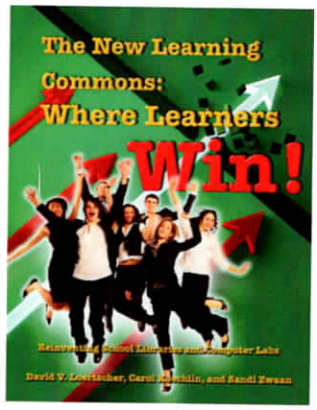
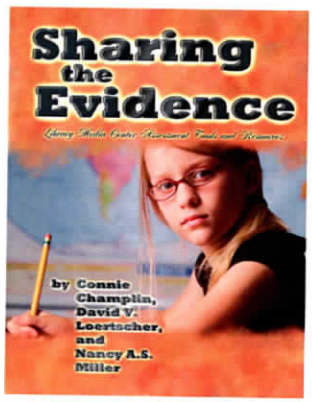


The New Learning Commons: Where Learners Win! David V. Loertscher, Carol Koechlin and Sandi Zwaan; ISBN: 978-1-933170-40-4; Hi Willow Research and Publsihing; 2008; $25.00

Loertscher, Koechlin, and Zwaan team up in this book to rethink everything about the function and role of school libraries and computer labs. It is often a case of 180 degree reconsideration. What does this mean? The profession has been on a command and control model: If we build it, they will come. We build a website and expect students and teachers to use it on our terms. They Google, instead. We expect teachers to appreciate the collections we build. They want classroom collections. We open our doors during the school day. Our patrons want 24/7-365 service.



Sharing the Evidence: Library Media Center Assessment Tools and Resources Connie Champlin, David V. Loertscher and Nancy A.S. Miller; Hi Willow Research & Publishing, 2008; Refresh Edition; ISBN 978-1933170-35-0; $25.00

Linking library media programs to achievement continues to be a central element in the justification and systematic improvement of the LMC existence in the school. The authors pull together simple to advanced techniques, instruments, and strategies to measure five program elements of the library media program: reading, collaboration, information literacy, technology, and the administrative function. The book is both in print with an online component that allows easy access to forms and resources on the web. The authors have concentrated on measures of program most likely to demonstrate impact with a minimum of time in the collection and analysis of data. Particularly useful not only in a single school, but across schools in a school district. New measures and updated resources added to this edition.

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