Increasing Academic Achievement Through the Library Media Center

A

Guide for Teachers

2nd Edition

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Contents

INTRODUCTION

Why take your students to the library when the pressure on achievement scores is so intense?

Because they'll score higher!

Three other good reasons for overworked teachers:

1. You get a second teacher to help! (It cuts the teacher-pupil ratio in half!)
2. For students who can't read the textbook, the library has something for everyone.
3. With two teachers, you can push active learning and high level thinking for each learner.

This volume contains one-page ideas (sometimes two-page) and is designed to help teachers take the greatest advantage of what good library media programs can offer. It introduces teachers to the possibilities of meaningful collaboration and use of information resources that can improve the quality of instruction without necessarily increasing workload. It acts as a framework for teachers and library media specialists in working together toward the common goal of raising student achievement.

The book is divided into five main sections that discuss:

1. Three key ideas to transform your research assignments
2. Collaboration between teachers and library media specialists in the design of learning.
3. Creating an information literate learner.
4. Building avid and capable readers.
5. Enhancing learning through technology.
6. Supporting your school library program.

Within each section, pages have been designed in such a way that each can be used as a handout for a workshop, an interview, a planning session. Many pages contain checklists to stimulate thinking and planning. Feedback to the authors is appreciated at [Davidlmc@qwest.net.] or to the publisher.

The second edition of this book contains a variety of additional pages, clearer ideas, and revisions of the best of the first edition.

How to Use This Book With Your Library Media Specialist:

Find an idea you like? Photocopy the page and give it to your library media specialist with a cookie on top. Say, "I'd like to try this idea. When could we meet to discuss it?"

THREE KEYS TO TRANSFORMING YOUR LESSONS

It's not always about more work for the teacher.

It seems like every new idea that comes along asks just a little bit more out of the teacher. The planning, monitoring and assessment of research assignments is already a demanding part of a teacher's work. The ideas in the following pages don't necessarily ask you to do more—only to do differently.

You can transform your research assignments to boost achievement by incorporating three key suggestions into your planning:

1. Change the Question

2. Change the Product

3. Change the Assessment

If you only have a few minutes to read this book, then just read the next three pages.

Transform Your Lesson: Change the Question

If the final products don't reflect your expectations, don't complain; just transform the original question with the following criteria in mind:

- ❑ Has it already been answered satisfactorily in published sources?
- ❑ Does it require multiple sources to answer?
- ❑ Does it raise other important questions?
- ❑ Does it have more than one right answer?
- ❑ Is it interdisciplinary?
- ❑ Does it provoke and sustain student interest?

Here are some typical problems related to research assignments, and some ways that changing the question can help solve them:

Problem #1: Plagiarism

Original Question		Revised Question
Write a report on the key features of an ancient culture	Answer is readily available in published sources, does not spark additional questions.	Develop criteria for ranking cultures. Compare an ancient and a modern culture based on that criteria.

Problem #2: Students Rely on Too Few Sources

Create a presentation for the city council recommending the best way to solve our water treatment problems.	Can be answered using a single source.	Present a set of options to the city council for ways to solve our water treatment problems. Evaluate the strengths and weaknesses of each option.

Problem #3: Question Doesn't Sustain Student Interest

Make a poster that summarizes the important points about a major health issue.	Doesn't connect directly to students' lives, doesn't require interdisciplinary approach.	The Health Foundation is offering a grant to support a major public awareness campaign for teen health issues. After gaining background knowledge on the major teen health issues, create a plan that satisfies the requirements of the grant. Include sample products for the campaign such as brochures, web pages and newspaper ads. Write a one-page brief about why you believe the issue you chose is most important to address in our town.

Questions about Questions?

Resources for creating good questions

Cushman, Kathleen (1989). Asking the essential questions: curriculum development. *Horace*, 5(5). Available <http://www.essentialschools.org/cs/resources/view/ces_res/137#>

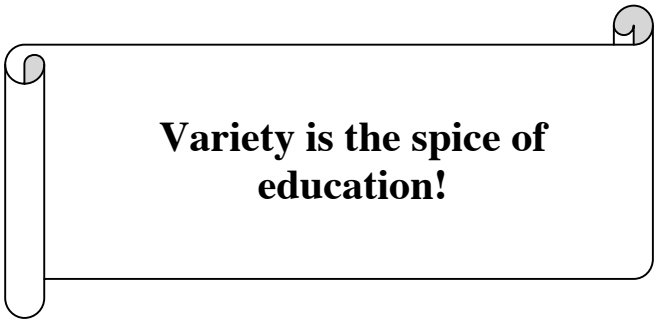
McKenzie, Jamie (1997). The question is the answer. *From Now On Educational Journal*, 7(2), available <http://www.fno.org/oct97/question.html>

McTighe, Jay, and Grant Wiggins. (1999) The understanding by design handbook. Alexandria, VA: ASCD Publications.

Transform Your Lesson: Change the Product

Learners become bored and unmotivated when the same endless product is required. Remember the ubiquitous book report when you were in school? The three-page report?

Now it seems to be Death by PowerPoint!



Consider the following reasons to give students opportunities other than their regular diet. All these will:

- stimulate interest,
- allow students to learn a new communication skill, and
- increase learning:
  - A new technology (the digital camera, producing a video, a computerized graph or chart maker, a timeliner, Inspiration, a web page editor, a new word processor)
  - Transforming a report into a new genre (a dramatization, a poem, a chart or graph, a PowerPoint presentation)
  - Any novel medium of communication (a conference call debate, a computer discussion board, publishing on the web, a presentation to a government body)
  - Anything that is not a part of their steady diet (those accustomed to PowerPoint presentations may be asked to write a report; book reports uploaded to the web; televised interviews)
  - A product they can't just cut and paste into something they turn in (have them turn in the original along with the transformation).
  - A real-world problem to solve.

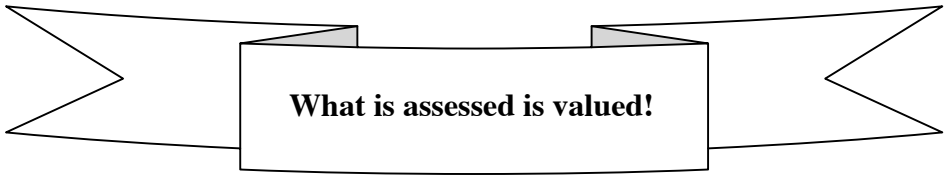
- **Aren't new products more work for me?** Not necessarily.

- **Suppose I lack ideas?** Ask your library media specialist; they are paid to help.

- **Who will teach the skill for the new product?** Ask the library media specialist or the technology specialist.

Transform Your Lesson: Change the Assessment

The old adage is quite appropriate:



Test scores will improve by teaching learners to bubble, but the slight rise will not last.

One of the best analyses of achievement tests is to classify questions on an old test between content items and process items:

- Items that require direct knowledge or background in the content. (What is the capitol of Arkansas? Eight times four equals…, ; items of comprehension of what was just read)
- Process items (items that require interpretation of data from charts, tables, maps, etc.; items that require analysis or synthesis, compare/contrast) These items would be identified by library media specialists as information literacy items.

The library media specialist would prescribe two things for learners needing to score higher:

- Lots of reading (which will build background and general knowledge),
- Information literacy skills requiring learners to extract, analyze and synthesize information.

For example, in a recent analysis of an 8th grade Texas test, half the items were content and half were process. Teachers who worked closely with library media specialists during the year to learn data handling, analysis, and synthesis of library media information sources placed their students in a very favorable position. On another grade level of the state test, content items predominated. Thus, the library media specialist was pushing lots of reading during topical units of study and increasing the amount of non-fiction read by that grade level.

Because the library media center has information sources at all levels, in every discipline, and at a variety of interest levels, the opportunity to grow intellectually is unlimited.

But what does this have to do with changing the assessment?

Teacher/library media specialist teams can examine the state standards, peruse the tests, and plan for activities that will not only help students cope with that one form of assessment, but can also build deep understanding.

Idea: design a joint rubric with the library media specialist that covers both content and process items. (see p. 63 for details)

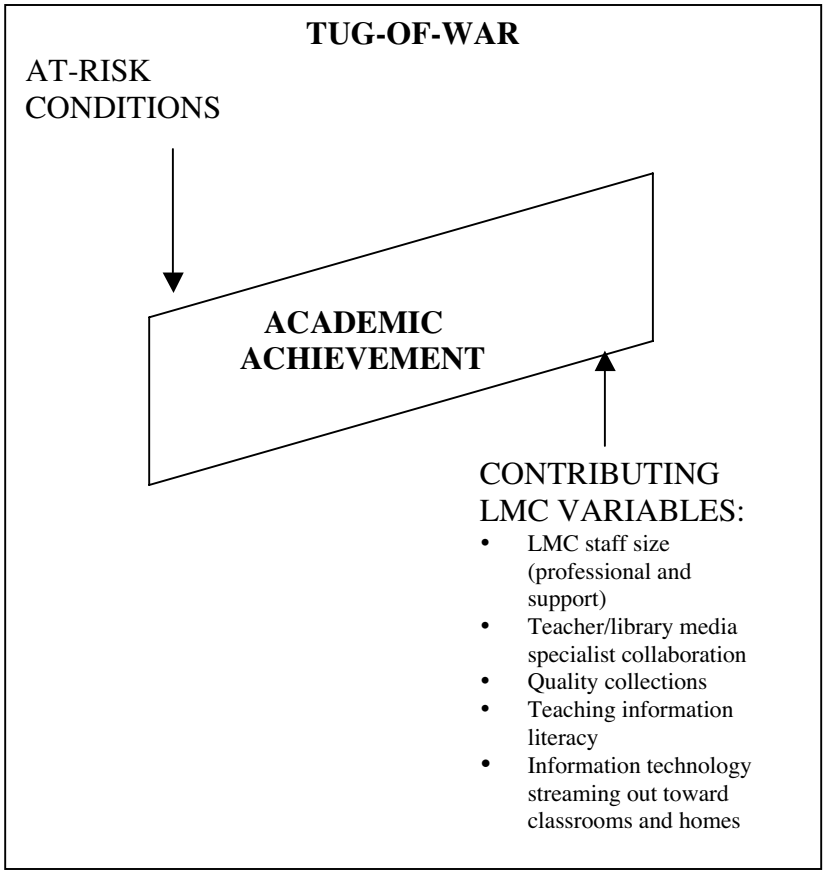
What the Research Says:

The Connection Between School Library Media Centers and Academic Achievement

Fifteen major studies done since 2000 in 1500+ schools: Alaska, Pennsylvania, Colorado, Texas, Oregon, Iowa, New Mexico, Missouri, Massachusetts, Michigan, Florida, Minnesota, North Carolina, Ohio, and Rhode Island

Strong school library media programs make a difference in academic achievement. This happens when the library media center has a high quality, information-rich and technology-rich environment, is easily accessible to students and teachers, and when there is both professional and support personnel who provide leadership and tireless partnering. Significant contributions happen in spite of the presence of at-risk factors.

The findings are quite consistent across the various states. The bottom line seems to be that a good school library media specialist collaborating with a teacher will transform information technology into quality learning experiences.



Sources

- The studies from Colorado, Alaska, Pennsylvania, Texas, Oregon, Massachusetts, and New Mexico are summarized in: Lance, Keith Curry and David V. Loertscher. *Powering Achievement: School Library Media Programs Make a Difference: The Evidence*. 2nd *ed*. Salt Lake City UT: Hi Willow Research & Publishing, 2003.
- Many of the studies are available either in print or digital form at: http://www.davidvl.org under "Research"

TEACHER AND LIBRARY MEDIA SPECIALIST COLLABORATION:

The Other Half of Good Teaching

Feeling Overwhelmed?

Confused by all those standards?

Demands too great?

Students doing less well than you'd like?

Consider new ways the library media program can help!

The first section of this book concentrates on the collaborative process of the teacher and the library media specialist to plan, implement, and evaluate improved learning experience that will result in more learning.

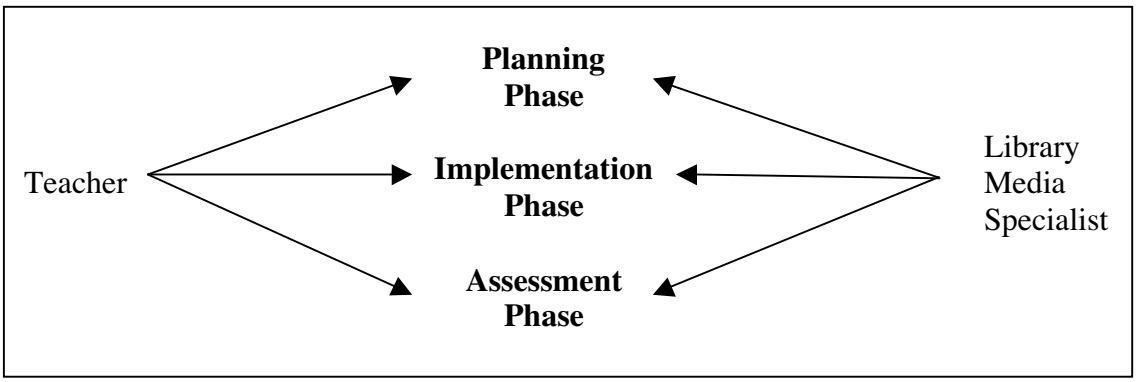
Teacher/Library Media Specialist Collaboration: What Is It?

Two partners, the teacher and the library media specialist, team to exploit materials, information, and information technology to enhance a learning activity.

Together, they:

- Plan goals and objectives of the unit.
- Complete preparations for the unit.
- Teach jointly the learning activities.
- Utilize technology to achieve learning objectives.
- Assess learning and the learning process.
- Assess the materials, information, and information technology used.

Such collaborative learning experiences can be projects of a few days, several weeks, a semester, or even a year.



Why is a professional library media specialist an essential part of collaboration?

The library media professional has:

- Knowledge of the curriculum, teaching, and learning.
- Education (this person often holds teacher credentials plus a library media credential).
- Experience working with teachers, learners, and materials.
- Tools and materials expertise (knows the right tool and information source for the right person at the right time).
- Knowledge of techniques for using technology to enhance learning.
- A repertoire of successful practices with a wide variety of teachers, students, and technologies—thus serving as an idea fountain.
- Knowledge of student achievement over time.

The bottom line:
When two professionals are delivering a quality learning experience, the odds of success are doubled.

Teacher/Library Media Specialist Collaboration: What It Looks Like

If teachers and the library media specialists are collaborating successfully to build quality learning experiences, what would an observer see:

Teachers and library media specialists are:

- ❑ Brainstorming a curricular unit.
- ❑ Developing plans, activities, and assessments for a learning experience.
- ❑ Choosing the materials and technologies to support instruction.
- ❑ Working side by side as the unit activities happen.
- ❑ Jointly evaluating the success of the unit.
- ❑ Engaging in staff development to refine the collaborative process.

Students are:

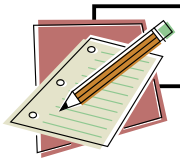
- ❑ Working in a bustling, learning lab atmosphere, on projects, problem solving, portfolios, presentations, and assignments.
- ❑ Using a wide variety of information sources and information technologies from print to multimedia to digital.
- ❑ Sharing their findings in group-related activities.
- ❑ Engaging in learning with interest and excitement.
- ❑ Working by themselves quietly on projects or research.

Library Media Center Facilities are:

- ❑ Functioning to support individuals, small groups, and large groups for quiet individual study, information gathering, busy production activities, group work, and presentations as the collaborative process begins to produce results.
- ❑ Rarely empty.

Library Media Center Networks are:

- ❑ Brimming with **quality** information streaming throughout the library media center, into the classrooms, and into the home.
- ❑ Being used and used and used.
- ❑ Available 24 hours a day, 7 days a week.
- ❑ Reliable.



Roadmap for Creating Effective Research Units

1. Review the goals, state standards, curriculum guides, and contents of your course.

Are the goals or standards part of an enduring understanding you want students to develop? If not, what is the enduring understanding behind the goal or standard? Need ideas for your unit? Brainstorm with your Library Media Specialist.

2. Check with your library media specialist about available resources and alternative teaching ideas using them.

As soon as you have an idea that a unit will involve research, check with your LMS about available resources. Sometimes a lack of resources just makes an assignment more difficult than you wanted it to be. If the LMS has enough lead time, appropriate resources can be acquired. And often, more is possible than you'd imagine. Remember, your LMS spends every day in the library. There may be journals, newspaper clippings, videos, cassette tapes, simulation software, and online resources you never knew existed to expand the possibilities of your assignment. Let the LMS in on this part of your planning and you won't be disappointed.

3. Refine your goals. Create one or more essential questions around which the unit will revolve.

Essential questions are those that:

- Have no one obvious right answer.
- Raise other important questions, often across subject-specific boundaries.
- Address the philosophical or conceptual foundations of a discipline.
- Recur naturally.
- Are framed to provoke and sustain interest.*

Need help creating essential questions? Ask your library media specialist.

* McTighe Jay and Grant Wiggins. *The Understanding by Design Handbook*. Alexandria, Virginia: Association for

Roadmap for Creating Effective Research Units

4. Plan with the library media specialist.

Issues to discuss with the LMS:

- What are the goals/objectives/essential questions of the unit?
- Will this unit focus students on a few key steps in the research process, or will the entire process be emphasized?
- What information literacy skills will be taught?
- What technologies can/will be used to increase productivity and/or learning? What skills need to be taught in their use?
- How can we increase the amount students read in this unit?
- What are the learning activities? What are the responsibilities of the LMS and the teacher in teaching the activities? Where will the activities take place?
- How will the product and process be assessed?
- How will we know if the unit has succeeded?

5. Team-teach the unit with the library media specialist.

Reasons to Collaborate:

- Lowers teacher/pupil ratio.
- Provides students with more individual attention.
- Splits workload.
- Provides peer support.
- Adds a second perspective on trouble-shooting and problem solving during lessons.
- It's fun!

6. Evaluate student products with the library media specialist.

Collaboration in evaluating student work provides the teacher and the library media specialist crucial feedback on what did and did not work in the unit, so that revisions can be made for next time.

7. Evaluate the unit with the library media specialist.

A few minutes doing this can make all the difference in creating even more success next time around. See Evaluation Guides, pp. 17 and 18.

Collaborative Unit Planning Sheet

Teacher or team: _____
Library Media Specialist: _____
Content area: _____
Unit of Study: _____
Unit planning began (date):_____ **Unit ended (date)**:_____

Goals and Objectives / essential questions of the Unit:

How Will We Assess Learning?

Proposed Learning Activities and Products:

State Academic Standard:

Information Literacy Skills:

Integrated Technologies:

What additional reading would help?

Responsibilities: (for each, mark T= Teacher, LMS= Library Media Specialist; SP = Specialist; S = Student; A = All)

What Happened? (list activities as they occur)
Example: mini-lesson on how to judge currency of information (teacher and LMS taught)

Print p. 16 and 17 back to back and then attach additional sheets if needed, or p. 16 and 18, your choice.

Teacher/Library Media Specialist Evaluation of a Collaboratively Taught Unit

(TO BE FILLED IN AS A TEAM)

Unit title: _____
Total time spent by LMS:_____ **# Students affected:** _____

What worked well in the unit?

Suggestions for improvement:

(Time spent on Info. Lit. Teaching:_____)
(as a subset of the total time listed above)

How well were state academic Standards met?

Information literacy skills learned:

Technology impact:

Did additional reading help?

From both the teacher's and library media specialist's points of view, was this unit enhanced through collaboration?

❑ Yes ❑ No Why?

Was the unit successful enough to warrant doing it again in the future?

❑ Yes ❑ No Why?

How well did the library collection support the unit objectives?
Scale: 5 = excellent; 4 = above average; 3 = average; 2 = below average; 1 = poor

_____ Diversity of formats (books, multimedia, electronic)?
_____ Recency (books and other materials up to date)?
_____ Duplication (enough materials for the number of students taught)?
_____ Reading/viewing/listening levels meet students' needs?
_____ Average of above ratings

What materials/technology will we need if we are planning to repeat the unit again?(add a list)

This page could be the back of p. 16

Rating an Enhanced Learning Experience

Select a learning experience that both the teacher and library media specialist agree was an improvement over what would have happened had the unit remained in the classroom without the benefit of LMC resources and staff. Check characteristics that improved.

- ❑ Information literacy skills improved
- ❑ Learner's content knowledge improved
- ❑ Technology well integrated
- ❑ Learners did lots of hard thinking
- ❑ Two professionals helped
- ❑ Successful collaborative model
- ❑ Student products improved
- ❑ Memorable for learners
- ❑ Every learner improved
- ❑ Classroom/LMC facilities functioned well
- ❑ Technology (equipment, networks, etc.) worked as planned
- ❑ Learners learned more in the same amount of time
- ❑ Quality information used
- ❑ Learners more motivated
- ❑ Learners read a lot
- ❑ Critical thinking raised
- ❑ Special needs met
- ❑ Parents involved
- ❑ Worthy of publicity
- ❑ Learners more efficient
- ❑ Worth the time & effort
- ❑ Worthy of repeating
- ❑ Enjoyable / Fun
- ❑ Standards met

Enhanced Learning Experience

Unit title:

_____

Dates taught:

_____

Teacher/library media specialist who teamed:

_____

Other comments:

Improvements needed if taught again:

How well were state academic standards met?

Information literacy skills learned:

Technology Impact:

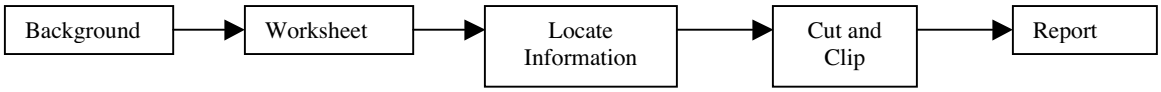
Impact of increased reading:

This page could be on the back of p. 16

Ban the "Bird" Units From the Library Media Center!

There are certain uses of the library media center that contribute little or nothing to learning. Teachers should recognize such low-level activities and re-design to build achievement.

What is a "bird" unit?



A common pattern:

1. The teacher provides background to a topic in the classroom (could be birds, presidents, countries, states, people, etc.).
2. Textbook work is done.
3. The teacher asks class to do a project in the library media center and provides a worksheet for data collection. The worksheet contains fact questions.
4. Students pick a "bird" to research and go to the library media center where the library media specialist introduces them to a few resources.
5. Students copy information from information sources onto their papers.
6. Students report back to the class or turn the papers in for a grade.

Why is a "bird" unit generally a disaster?

When the emphasis of research work in the library media center is merely the cutting and clipping of information into some sort of report and then presenting those facts, little learning takes place. In the age of technology, students can easily cut and clip megabytes of information from the Internet or electronic sources and turn them in as a report. Obviously, time in the library media center is wasted and little progress toward educational achievement is made. In fact, assignments like these encourage plagiarism.

What is to be done?

1. Re-design the activities so learners must THINK ABOUT the information they collect in the library media center, thus increasing learning and achievement.

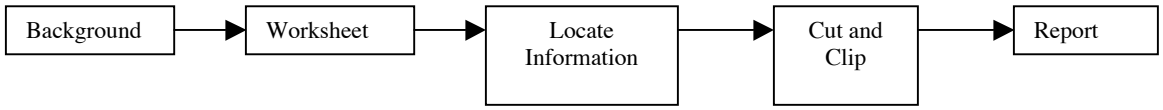
2. Re-design so that learners must DO SOMETHING with the information they collect such as sense-making, constructing charts/diagrams/maps/timelines, performing, trying out, acting, building, etc.

3. Keep redesigning until number one and number two happen.

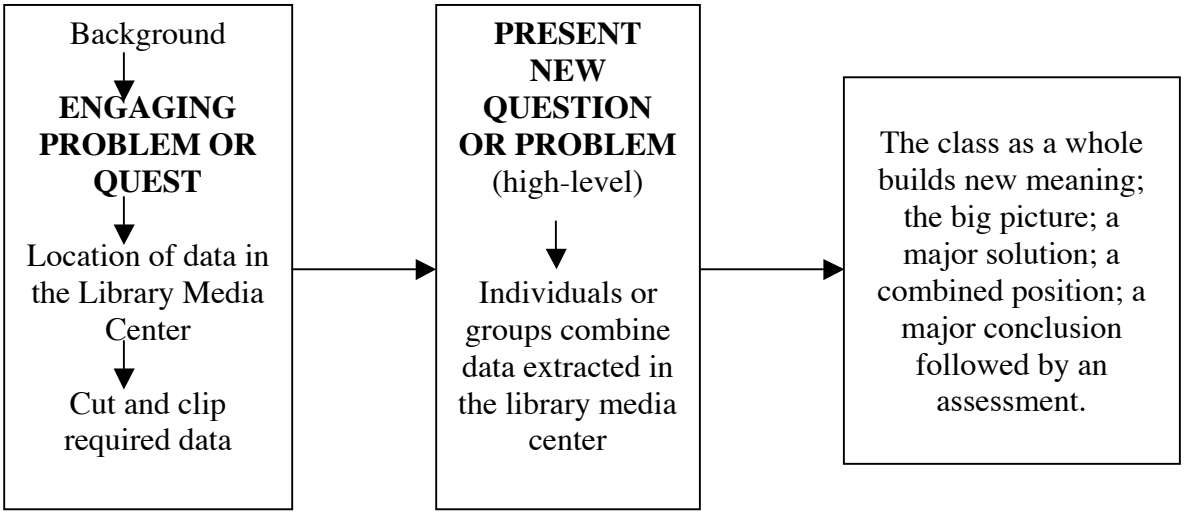
Building a Better "Bird" Unit

Generally, a small change in the structure of a unit plan can do wonders for learning. Here is one example to consider. Can you and the library media specialist create an even better one?

Old "bird" unit:



Better pattern:



In the above pattern, students are required to combine, manipulate, or rearrange the data they collect, causing them to think about what they have collected in order to solve the problem at hand. In other words, they fit the pieces they have collected into a large puzzle to discover what the whole picture looks like.

The challenge for the teacher and the library media specialist is to construct the two questions or problems that cause higher-level learning to happen. And if the report time of the old unit is eliminated, the reconstructed unit should take about the same amount of time to teach.

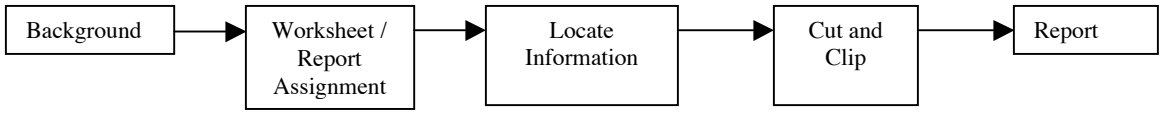
Challenge

Develop and re-design a learning experience until it becomes a super learning experience. Discuss this experience with other faculty and administrators.

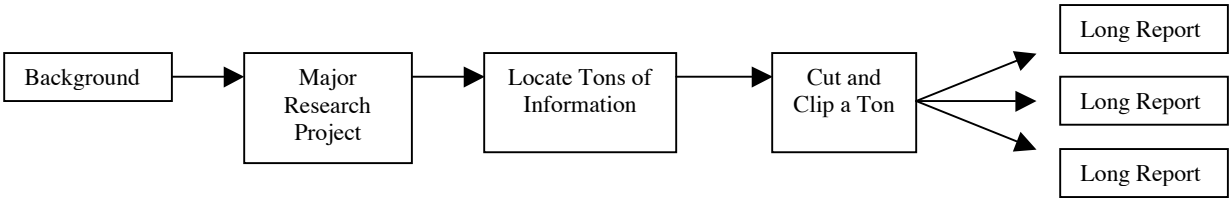
The "Fat Bird" Unit: One Step Up; Still a Ways to Go

One improvement on the old bird unit is to increase the amount and depth of research done in the library media center. Instead of a work sheet or short report, learners would do the "fat bird unit" by doing in-depth reports or term papers as pictured below.

Old "Bird" Unit:

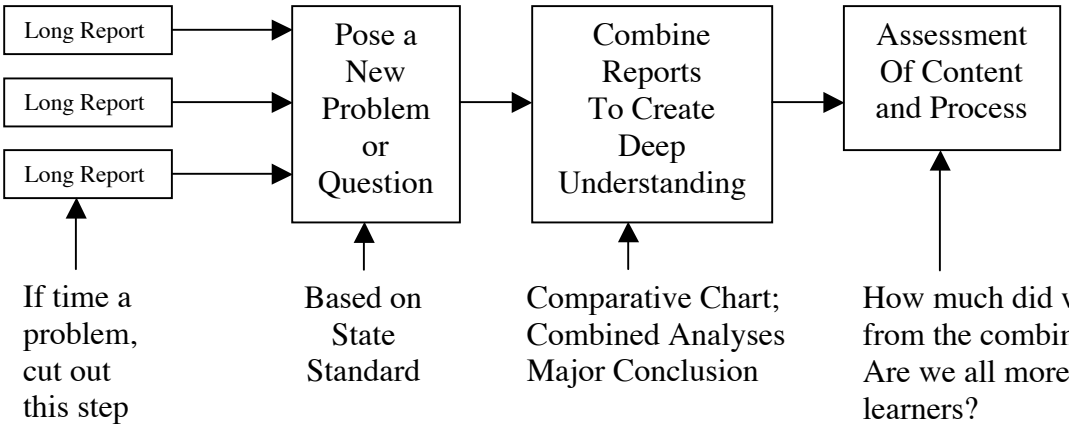


The "Fat Bird" Unit (one step up):



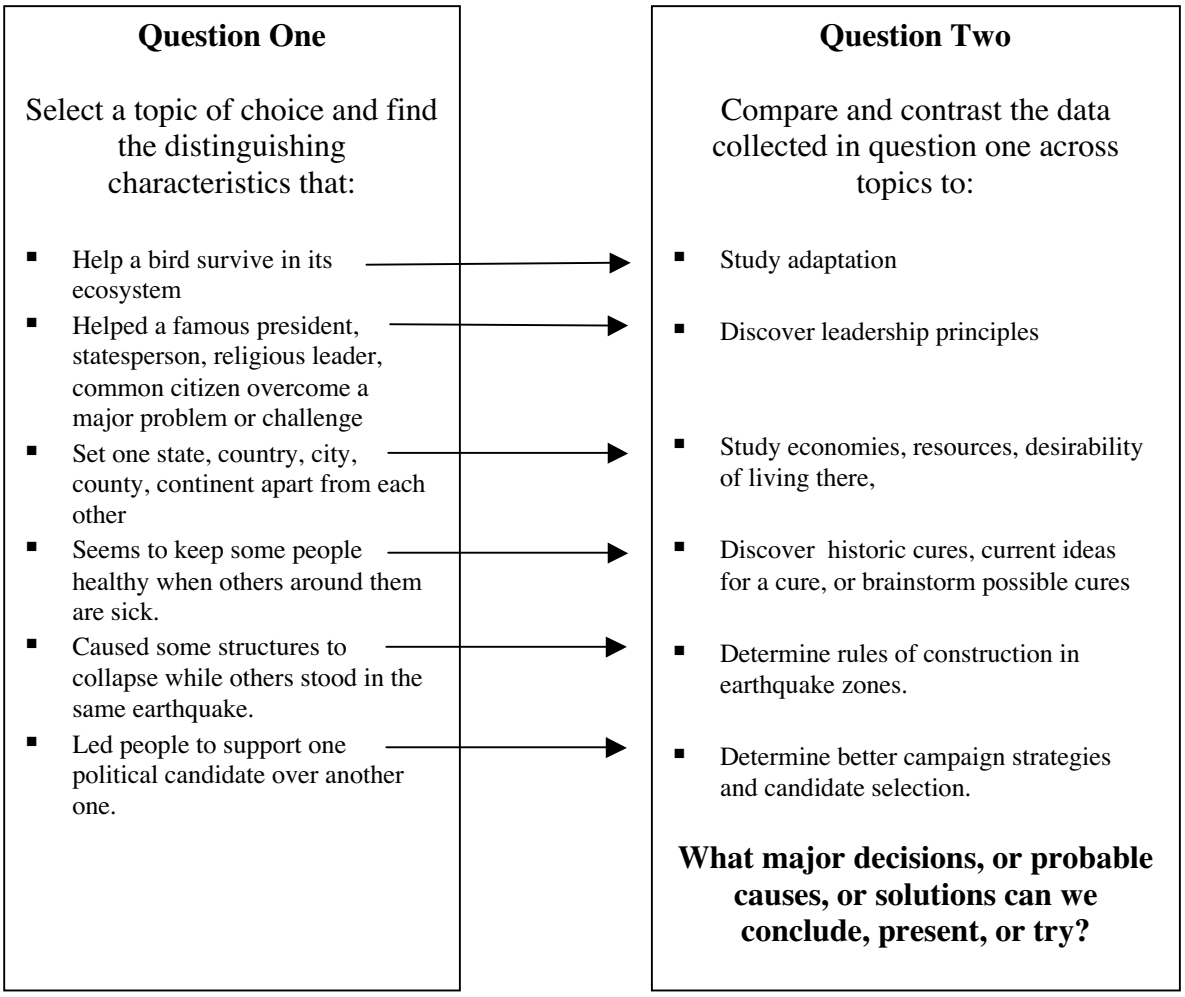
So what's wrong with the "fat bird" unit? If students are serious about their major topics and research, they end up knowing a lot about one aspect of the original topic. Examples – a lot about robins, little about birds in general; a lot about Abraham Lincoln, little about presidents as a group; a lot about a favorite poet, little about poetry. In other words, they may know a great deal about one aspect of a state standard but not a deep understanding of the standard as a whole.

One solution: Create a Bird Banquet:



Sample Better Bird Units To Try in the LMC

Using the pattern on the previous page, here are a few possibilities to try.



Challenge

Collaborate with your library media specialist to improve on the ideas here.

Two Ideas that Work in the Library Media Center

Two thoroughly tested ideas work when teachers and library media specialists collaborate in both the classroom and the library media center. They work in information-rich and technology-rich environments and are designed to boost achievement by pushing higher-level thinking and active learning.

The Matrix

The matrix is actually a spreadsheet where individuals or groups do research to place facts, data, opinions, ideas, or characteristics in the proper cell. Then the class as a whole does analysis on the entire matrix to make decisions, note trends, evaluate ideas, compare and contrast, see the big picture, or any other high-level thinking activity. The matrix works at all grade levels and across all disciplines.

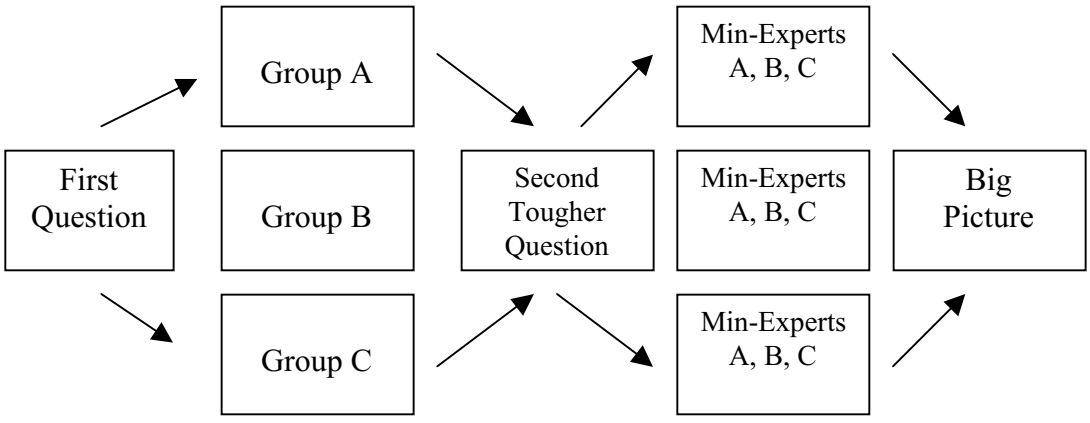
Cathy Marriot's Kindergarten Pick a Class Pet Research Project:[1]
First step: Set up the problem and do research in the library, at home, and in the community.

	Does it stink?	What does it eat?	Is it legal?	What does the zoo keeper say?
Canary Group				
Turtle Group				
Tiger Group				
Gerbil Group				

Second step: Learn decision-making skills; then make the decision based on sound data.

The Jigsaw

The jigsaw begins with individuals or groups doing data-gathering and research on a question so they are "mini-experts." Then instead of reporting out, representatives of the various groups combine their "expertise" to solve a larger, more complex question.



[1] Marriott, Cathy. *We Are Information Literate!: The Video* Salt Lake City: UT: Hi Willow Research & Publishing, 2003. Available from http://www.lmcsource.com

WebQuests: Keeping Students on the Right Path Down the Information Highway

Three of the biggest obstacles students face during research projects:

- No solid sense of the research process.
- Too much time spent finding information, not enough time analyzing, evaluating, and synthesizing it.
- Indiscriminate use of information sources without evaluating them.

One of the solutions to these obstacles: WebQuests

WebQuests are web-based assignments that engage students in interesting and preferably real-world problem solving. By planning according to a set of specific steps and pre-selecting online resources, teachers and library media specialists guide students through the research process and help them focus their energies on analyzing, evaluating and synthesizing information and on creating final products that reflect such thinking.

Elements of a WebQuest:

- An introduction that sets the stage and provides some background information.
- A task that is achievable and engaging.
- A set of information resources (online, print, etc.) selected by the teacher and library media specialist to complete the task.
- A description of the process the learners should go through to accomplish the task.
- Some guidance on how to organize the information acquired.
- An evaluation, often a rubric, designed to measure results.
- A conclusion that brings closure to the quest, reminds students of what they've learned, and encourages them to extend the experience.

Why WebQuests work:

- Promote critical thinking with emphasis on essential questions.
- Work well with cooperative learning.
- Structure complicated research assignments.
- Take advantage of online resources without leading students on a wild goose chase.

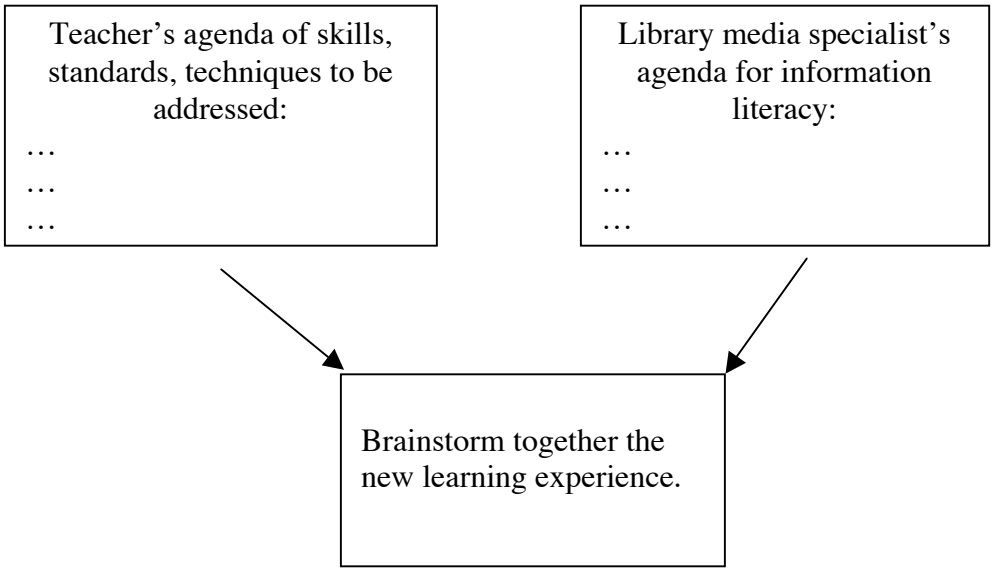
How the library media specialist can help:

Partner with the LMS to plan, find resources, suggest organizational strategies and use of technology, guide students through the process, and evaluate the success of the project.

Key Resource: Bernie Dodge's Webquest Page, http://edweb.sdsu.edu/webquest/webquest.html

Integrating State Standards/Curriculum Goals in the Planning of a Library Media Center Activity

Every year, it seems that another agenda, list, skill, directive, standard is required to be integrated into the various units of instruction taught without increasing the amount of time. At times it seems overwhelming. Realistically, in most schools, there will only be a few occasions during the year to plan in-depth with the library media specialist. Try the following approach:



Challenges:

1. How can we overlay both agendas without increasing the amount of time for the learning experience?
2. What activities have we done in the past that could be streamlined or eliminated?
3. Can we redesign in such a way that motivation and engagement are heightened?

Tips:

1. Can information-finding time in the library media center be compressed?
2. Can student reports be compressed, eliminated, or transformed into more meaningful learning activities?
3. As learners read, view and listen, can they not only take notes but mind map as they go (forcing them to focus on the major ideas)?
4. How can the amount of time creating the hi-tech product be compressed so learners concentrate on content, not the technology? Sometimes low-tech products might be more efficient.

Going Beyond Standards to Reach Enduring Understanding

A major appeal of Wiggins' and McTighe's *Understanding by Design* model is its insistence on articulating an enduring understanding at the outset of planning a unit.[1] The authors offer four possible criteria for enduring understandings. They may be:

- ➔ enduring and transferable ideas, having value beyond the classroom
- ➔ core processes at the heart of a discipline
- ➔ abstract, counterintuitive, often misunderstood ideas
- ➔ big ideas embedded in facts, skills and activities

Such enduring understandings often are broader in scope than content standards. Consider the following national standard in visual arts for grades 9-12:

Content Standard

Students compare characteristics of visual arts within a particular historical period or style with ideas, issues, or themes in the humanities or sciences.

⬇

Enduring Understanding

The art of an historical period is often a response to ideas, issues or themes present in the larger society.

Note how the depth of understanding must change to move from the standard to the enduring understanding. A student may capably make a connection between the art of the Andy Warhol and the rise of the suburbs but may never see the broader trend of art as a response to issues in the larger society. Teachers lead students to enduring understandings not by covering material, but by helping students in *uncovering* the understanding beneath the material.

How the library media specialist can help:

The library media specialist not only can help you brainstorm enduring understandings, but can also help you plot out a series of activities to help students get there. The LMS can help you deliver the right resource at the right time, and help you orchestrate the use of resources so that students uncover a deeper understanding.

Narrowly Meet a Content Standard	Demonstrate Enduring Understanding
Student may use a few resources, work independently, and consider the topic narrowly.	Student must use several resources, will benefit from collaboration, and must consider topic in a broad context.

[1] See McTighe Jay and Grant Wiggins. *The Understanding by Design Handbook*. Alexandria, Virginia: Association for Supervision and Curriculum Development, 1999.

Reading Your Way Through an Instructional Unit With the Help of the LMC

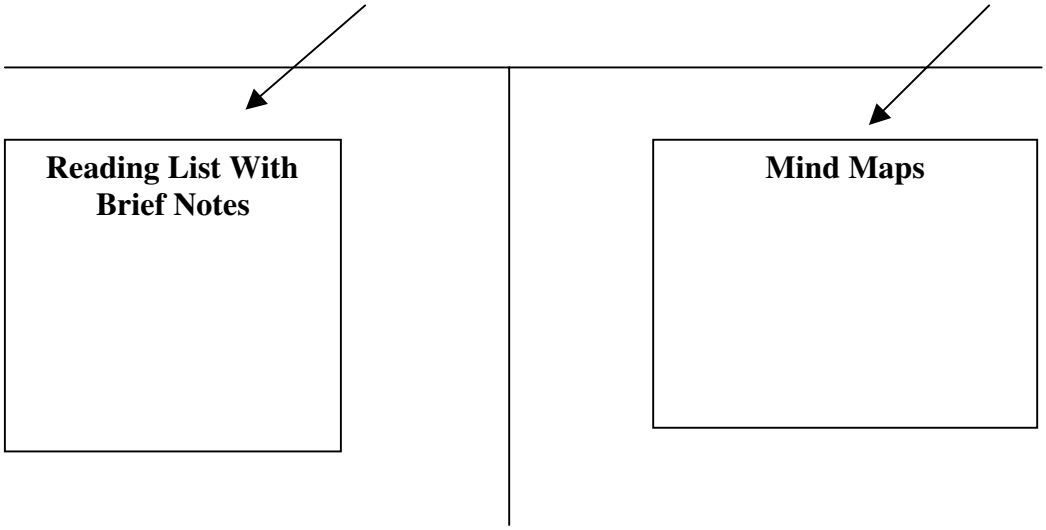
Problem: Many learners in the class either do now know English well or do not read well.

One idea to test: Have students read their way through a topical unit.

Step one: With the library media specialist, present the major question, standard, or concept the learners should understand.

Step two: Introduce tons of reading, viewing, and listening materials (book talks, descriptions, annotated bibliography). Make these materials available in the classroom and on line. Be sure that these materials are non-standard, i.e., including many pictorial sources, high interest-low vocabulary, timelines, comic book-type resources, charts, graphs, maps, models, realia, fascinating web sites, faction (fictional treatment of factual topics such as historical fiction), etc.

Step Three: Spend a chunk of time (2-3 full class periods or more) having everyone read, view or listen. As they do so, have them keep brief notes and at the last 10 minutes, do a mind map.



Alternate Step Three: As students read, they might keep notes such as:

Major Concept in My Reading	Why It Is Important	My Reaction

Step Four: Hold a discussion, an exploration, or a compare/contrast challenge on a high-level question—reflective of the major standard or concept of the unit.

Step Five: Do the normal assessment. How do learners perform? How did the poor readers or low-English learners do?

Rx for Cut and Clip

Problem: Are learners cutting and clipping facts, paragraphs, articles, or whole term papers from library books, periodicals, or Internet sites and turning them in as their own work? Perhaps they have become creative and "dress up" the appearance of what they find and then turn it in. The bottom line is that they do very little thinking or learning—a zero educational experience.

Rx: With the library media specialist, build better questions for learners; have learners build better questions for themselves. The definition of a better question is one that cannot be answered through cut and clip mentality.

Examples:

Invitations to cut and clip:

- A list of fact questions to answer.
- An assignment where the "answer" is easily located in a periodical article, a book, or a web site.
- "Do a report on a topic of your choice."

Challenges to think:

- Compare/contrast two opinion pieces.
- Insert extracted data into a larger matrix, chart, diagram, or mind map for analysis.
- Look for trends across extracted sources.
- Build in-class timelines, then look at the meaning, cause/effect.
- Take on the persona of an important character; re-enact an event.

Ideas for Other Opportunities and Challenges

Suggestions when teachers and library media specialists collaborate:

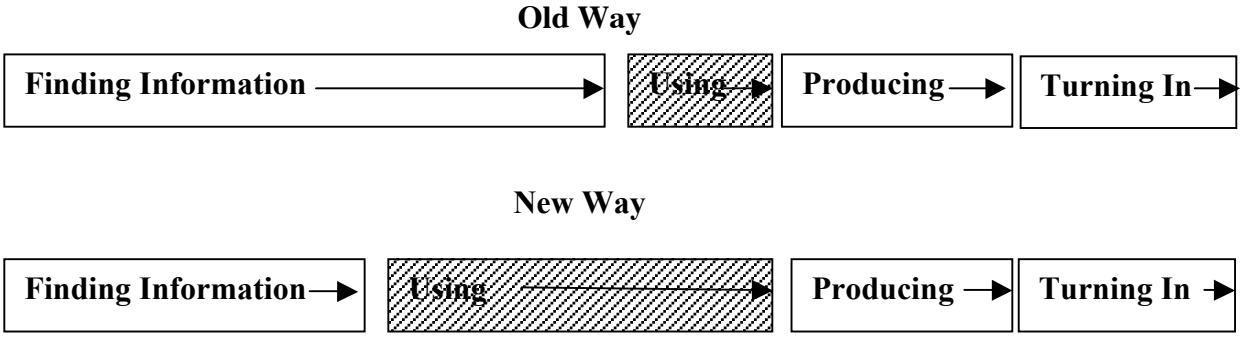
- Create good and clear assignments so students can begin immediately and stay engaged.
- Include creative uses of technology that will contribute to both learning and interest.
- Require a wide variety of information sources to help students explore the rich world of information across the media.
- Build the research process into the whole project so that students keep making progress toward becoming independent and more sophisticated learners over time.
- Build in reflection along the way to help students assess what they know and how efficient their strategies are.

Activities Likely to Fail

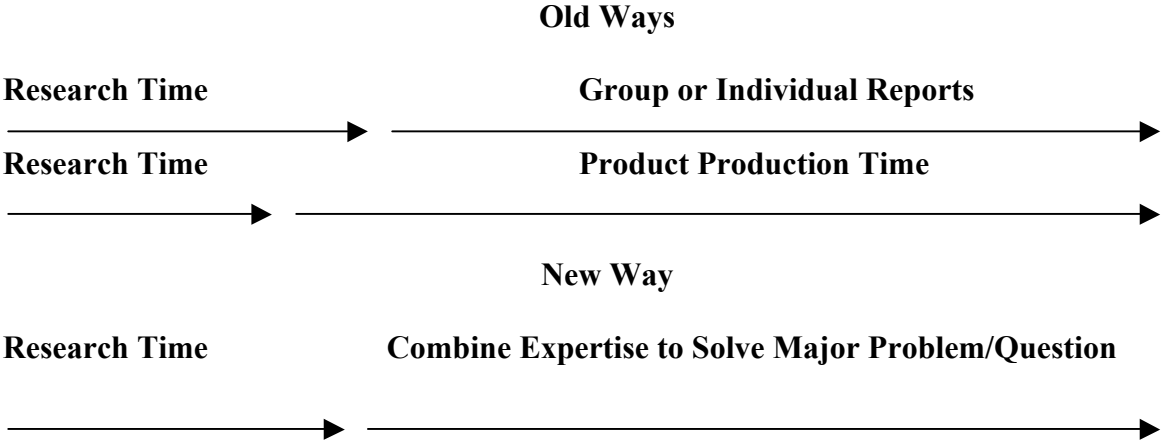
- Spur-of-the-moment activities with little notice given to the library media staff.
- Unclear assignments or directions to learners, causing them to waste time, develop behavior problems, or wander in a state of stupor.
- Competition for scarce information resources (when every other teacher is having students research the same topic at the same time).
- Assignments that do not require evaluation of information sources (you will get back information copied from the first hit on an Internet search, facts copied from an out-of-date reference source, and other nonsense mindlessly regurgitated).

Pacing the Library Media Center Activity: It Can Make All the Difference!

Pacing a learning activity is critical if deep learning is to be elevated. We are all familiar with searching, retrieving, procrastinating, and doing the final project the night before it is due. Helping learners manage the learning task focuses emphasis on reading, analyzing, synthesizing, concluding, and metacognitive tasks. Building checkpoints can help change the schedule as illustrated below.



Another streamline of the learning activity as a whole might be to look for certain activities that consume time without retuning significant learning and replacing that time with an activity holding more promise. Consider the suggestion below:



Building a Repertoire of Collaborative Projects With the Library Media Specialist

Let's face it, there are many teachers and few library media specialists. If every unit were jointly planned, implemented, and assessed as a team, the library media specialist would burn out in a week. Nevertheless, teachers will want to take every opportunity to collaborate. One strategy for the library media specialist to stay alive is to collaborate, release; collaborate, release. Consider the following:

First Time a Topic is Taught:

Plan Together → Team Implementation → Assess → Revise

Second Time Around:

Shorter Planning → Teacher More/LMS Less Implementation Time → Assess

Third Time Around:

Teacher-directed with minimal need for library media specialist
Teacher and library media specialist tackle another unit for redesign
Etc., Etc., Etc.

Consider a second model designed to spread the library media specialist's services:

Use model one except ask the library media specialist to collaborate with a group of teachers rather than an individual (a grade level, department, existing team, etc.).

Warning: All planned units get stale!

- **Poor**: Plan once, teach many times.
- **Better:** Plan once, teach a few times; revise and rejuvenate

Why Keep Collaborating With the Library Media Center Staff

What are the essential reasons for the teachers and the library media staff to keep working together, building good relationships, retrying when relationships may become strained, and just building consistency over time?

Checklist:

- ❑ Every time we collaborate there is a lower teacher/pupil ratio for the unit.
- ❑ Collaboration capitalizes on twice the teaching experience.
- ❑ There is a peer available to "evaluate" plans.
- ❑ We combine creative ideas with a realistic sense of what will work.
- ❑ Collaboration maximizes productivity.
- ❑ We split the work load.
- ❑ During collaboration, we encourage each other when things get tough.
- ❑ We provide support if and when needed.
- ❑ When there are funds for materials and information resources, collaborative partners usually get higher priority.
- ❑ It would be difficult to do worse than if either collaborative partner tried to "go it alone."
- ❑ We can draw upon each other's native abilities and strengths.
- ❑ Discipline problems are cut in half.
- ❑ If students don't do as well academically as we thought, we redesign until we get the results we expect.
- ❑ There is more time to deal with individual student differences, abilities, learning styles, etc.
- ❑ We can devote more time to helping each student succeed.

Getting Your Share: Working the LMC Schedule to Your Advantage

Not all units of instruction lend themselves to an information-rich high-tech environment. The teacher is wise to choose a few learning experiences where collaboration is likely to maximize learning. Consider the following questions designed to help select the best units for collaboration.

1. What units would flourish in an information-rich environment?

2. What units are better taught in depth rather than breadth?

3. Which topics lend themselves to "two heads are better than one?"

4. How can I space the collaborations across the year to provide the best variety of learning experiences for my students? Would four times a year (twice a semester) be a good first goal?

Sample topics that might be better in the library media center:

- **A topic where issues, opinions, or positions are central to the main concept.** (Human cloning, Arab/Israeli conflict, community issues, state or national elections, foods that help prevent heart disease.)

- **Topics where the textbook coverage is so sparse that learners cannot develop enough background knowledge or depth of knowledge to count for anything.** (Rain forest, Vietnam War, why a particular novel was a landmark of its time, the impact of scientific learning on culture, What causes people such as the Pilgrims to embark on huge journeys?, Why did it take mathematicians 400 years to figure out how to calculate longitude? (trick question), How does art seem to reflect the society of its time?)

- **Topics where lots of individual learner choice in exploration would increase motivation. (**Learners can read a wide variety of materials on a topic – at their level; a favorite dinosaur can be explored in depth; my own career interest can be explored in depth; my interest in particular sports and sports figures can be pursued; issues I feel strongly about can be illuminated.)

- **Topics lending themselves to creative expression.** (Recreating a period drama to get the historical setting right, retelling the Cinderella story from many cultures, comparing performances of a piece of music across time as we create our own interpretation, recreating cultural artifacts.)

Self-Assessment Page for Teachers: Collaborative Success

Classroom teacher/library media specialist collaboration does not happen automatically. Both partners must work at developing sound collaborative strategies that result in higher quality learning experiences. Library media centers and technology are very expensive tools that can be ignored, abused, or used to benefit learners. Check your own progress toward exploiting this major tool:

Collaboration Checklist for the Teacher

- ❑ I seek ways to create a solid collaborative working relationship with the entire library media staff.
- ❑ I encourage professional development opportunities that include the library media staff so we have "excuses" to plan together and both learn new techniques.
- ❑ I seek for time to plan with the library media staff, including encouraging administrators to account for this in their all-school planning.
- ❑ If collaborative planning sessions are not productive, solutions are sought until they become effective.
- ❑ My collaborations with the library media staff include evaluations and retooling of learning activities.
- ❑ There are incentives for collaboration to occur.
- ❑ The best collaborative activities are spotlighted for parents and the community.
- ❑ I have examined progress in academic achievement in areas where collaboration is taking place.
- ❑ The collaboration process with the library media staff is one mark of success on both the teachers' and library media specialist's annual evaluation.
- ❑ The library media specialist is on major governing councils and at curriculum meetings so they are included in curriculum decision making.
- ❑ I give time to the library media staff to prepare activities, facilities, and information networks in advance so learners have a productive experience.
- ❑ I create assignments beyond the "cut and clip" syndrome and "beyond the bird unit" so that the library media program can really contribute to academic achievement.

Notes:

CREATING AN INFORMATION LITERATE LEARNER

Definition:

Information Power, the major standards document of the school library field, defines information literacy as the effective use of ideas and information.[1] Another popular definition is "the ability to access, evaluate, and use information from a variety of sources."[2] A review of the research on information literacy looks at many models and their application with children and teenagers.[3]

For this publication, the information literate student possesses five qualities of mind and skill:

An Organized Investigator
A Critical Thinker
A Creative Thinker
An Effective Communicator
A Responsible Information User

One of the major agendas of the school library media profession is to assist students as they are introduced to an information rich environment and provide them with the research skills they need to survive. Library media specialists are interested in a certain quality of mind, a broadened capacity of information handling, an internalized model of personal research, and an ability to be a good citizen in the information world.

Library media specialists also know that the best way to teach the research process is to collaborate with teachers and teach the process "just in time" when learners must do projects assigned in the classroom.

Because information literacy is a newer, but key concept in education, the balance of this section covers this concept in more depth.

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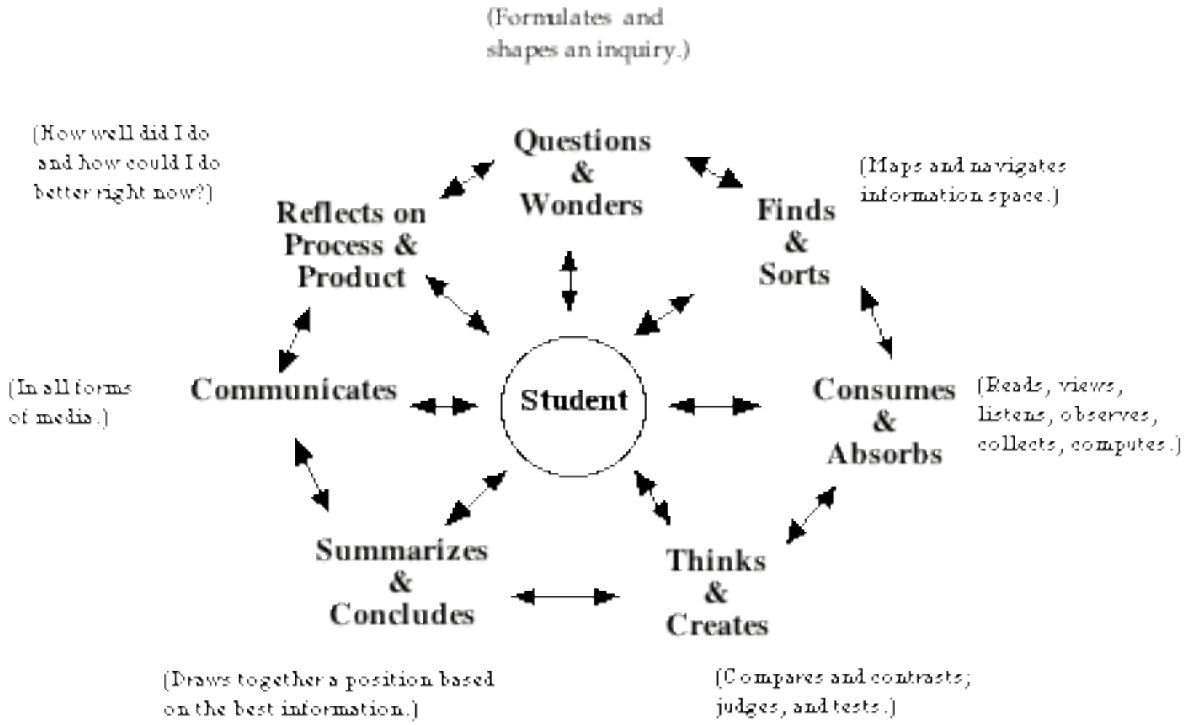
[1] American Association of School Librarians and Association for Educational Communications and Technology. *Information Power: Building Partnerships for Learning*. Chicago: American Library Association, 1998.
[2] Doyle, Christina S. *Information Literacy in an Information Society: A Concept for the Information Age*. ERIC Clearinghouse on Information and Technology, June 1994.
[3] Loertscher, David V. and Blanche Woolls. *Information Literacy: A Review of the Research*. 2nd ed. Hi Willow Research and Publishing, 2002.

An Organized Investigator

Traditionally, students have done little "research" or investigation until high school. However, the advent of constructivist principles plus the advent of rich information environments allow all students the opportunity to develop investigative strategies and become problem solvers and meet state standards at the same time.

Beginning inquirers need some guidance in developing a process for doing research. Each student can be introduced to a research process model adopted by the faculty for the school. Popular models include the Eisenberg & Berkowitz Big Six Skills, the I-Search Process created by K. Macronie, and *Information Power*.[1] A sample information literacy model is presented below.



After several research experiences using a research model, students can then develop their own model to match their individual learning style. 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. An effective activity with faculty is to present them with numerous information literacy models and then challenge them to develop their own in an hour-long professional development session. This gives them not only a sense of their own investigative style, but also a much clearer notion of what information literacy is and how it can be used in the classroom. Ask the library media specialist to conduct such an activity in your school.

[1] Many information literacy or research models are reprinted in: Loertscher, David V. and Blanche Woolls. *Information Literacy: A Review of the Research*. 2nd ed. Salt Lake City UT: Hi Willow Research & Publishing, 2002. Available at: http://www.lmcsource.com

How to Help Students Become Organized Investigators

Children and young adults at any age can begin learning the techniques of conducting inquiries and solving the problems they meet. Students may be beginners, intermediates or sophisticated information literates no matter the age, gender, cultural background, or principal language spoken. It is not difficult to recognize the difference in sophistication.

Beginners
- Frazzled
- Lost
- Can't pick a topic for research
- Can't find information
- Desperately needs help
- Needs help constantly
- Distracted
- Uninterested

Intermediate
- Self-starting
- Still a roller-coaster experience
- Needs support
- Has moments of insight
- Interested
- Somewhat systematic
- Will take advice

Advanced
- Independent learner
- Knows where to go and how to get there
- Asks advice to monitor progress

With the library media specialist, teach information literacy skills <u>just in time</u> to your class as they approach a research project. Here's how:

- Teach an entire information literacy model. Use it as a scaffold step by step through a research project.

- Teach only one skill per research session – the one critical to achieve a particular state standard such as:
  - Building a better question.
  - How to compare/contrast.
  - How to chart or graph factual data.
  - Analysis of data to discover a trend.
  - How to use a spreadsheet to analyze data.

- Build sophistication over time, such as:
  - Importing graphs and charts into reports.
  - Using multiple information sources rather than single ones.
  - Discerning point of view when the author is at neither polar opposite.

Background-Building and the Research Process

Students' initial questions are frequently vague or ill-formed. Rather than insist that they clarify and sharpen their questions before they begin their search, allow time for a background-building search to help them form better questions.

Quick and easy background-building for research

Have students do one or more of the following:

- Locate and read an encyclopedia entry or other reference source for an overview on their topic.
- Read a newspaper or magazine account that provides context for their topic.
- Review their textbook for background on a topic they will expand.
- See a video that proides a solid background.

Tips for background-building:

- If you provide time and the structure for students to digest an overview of their topic, their questions will be more relevant, thoughtful and fully-formed.

- To structure background-building, see the variation on the KWL-Plus chart on the next page. In this version, students do some background-building before they write what they know and want to find out. In addition, they begin to anticipate types of resources that might help them.

- Provide plenty of opportunities for students to revise their questions along the way. It's only natural that the quality and kind of questions will change as students learn more about their topics.

How the LMS can help you with background-building for research:

- Locate reference resources at appropriate levels.
- Assemble periodical articles, magazines, pamphlets, or websites as background resources.
- Teach students how to locate and/or use specific reference resources.
- Provide instruction on use of table of contents and index.
- Teach students background-building skills and topic narrowing.
- Teach students the concept of "enough" during the background-building phase.

K-W-L Plus

Build Background	What do I know?	What do I want to know?	What resources should I use?	What did I learn?	What new questions do I have?

(adapted from Janet Allen's *Yellow Brick Roads: Shared and Guided Paths to Independent Reading*, © 2000)

Background-Building in the Classroom

Building background is an effective strategy for improving students'reading comprehension. Background-building involves activating prior knowledge, which can be done through KWL-Plus charts, brainstorming, quickwriting, analogies, and experiential activities. In addition, students often need new information to establish a baseline for more complex learning. Teachers traditionally do this through lecture, but library resources offer a rich infusion of background-building possibilities.

Background-building ideas using library resources:

- Read all or part of a poem or story to introduce an idea.
- Have each student read a poem related to a common theme, then lead a brainstorming session around that theme.
- Read aloud a high-interest newspaper or magazine article that introduces your topic.
- Have each student read a current newspaper or magazine article related to your unit. Students share summaries with class and develop thematic ideas related to your unit.
- Bring in art books, musical recordings and video clips of dance to introduce a social or historical idea as reflected in the art.
- Gather encyclopedias and other reference materials from which students create readers' theater around key events leading up to the unit you're about to study.
- Collect a wide range of reading materials (novels, plays, newspaper articles, non-fiction, biography, etc) around a common theme from an upcoming unit. Have students do "focused" S.S.R.
- Play video or audio clips that provide overviews or help set the stage for classroom discussion.

How do you know learners are ready for the next step in reading, research, and study? Use this checklist to help you decide:

Background-Building Checklist

My students have:

_ Connected the material to their own lives

_ Connected the material to other concepts they already understand

_ Connected the material to things they've read before

_ Generated their own predictions about what they're about to learn

_ Generated their own questions about the unit

_ Previewed difficult vocabulary for the unit

_ Developed a sense of wonder and enthusiasm for the topic

Information Literacy Skills and Study Skills: Cousins

Doing research projects is **work**. Both teachers and library media specialists deal with the learner who either is unmotivated or who has poor work habits. Counselors, teachers, and others have developed a set of widely known study skill habits that provide discipline to do assignments and research projects.

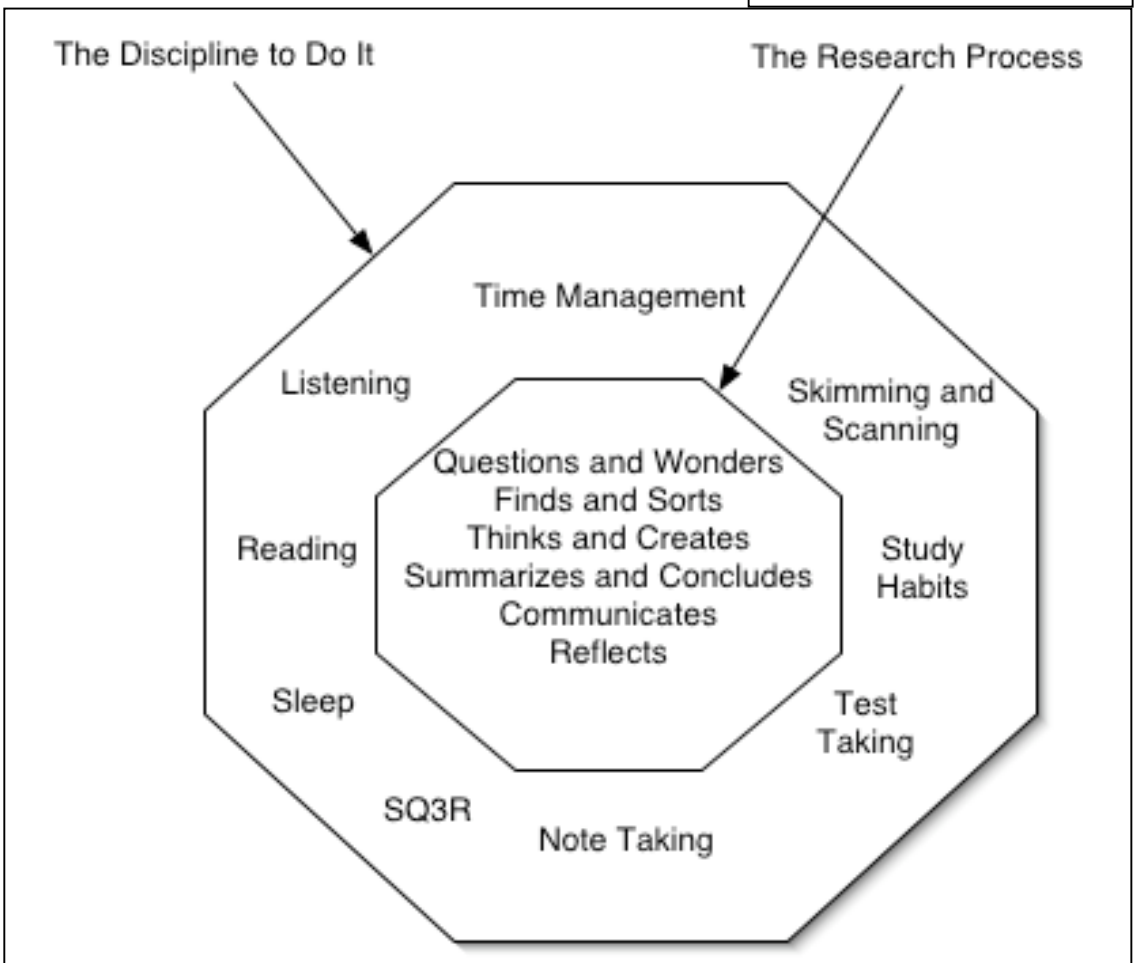
Luckily, the library media center has such a variety of materials and technology, that the possibilities for engagement are very high.

It is much easier to teach students study skills in an atmosphere of interest than of boredom. They become tips for efficiency rather than dictums.

Work with the library media specialist to teach both the techniques of research and the discipline to accomplish the task in a reasonable time frame.

Rx for Poor Work Habits

- Intriguing questions
- Engaging projects
- Sensible rubrics
- Caring coaching from teachers and library media specialists



Study Skills and Information Literacy

Helping Students Become Effective Questioners

There are many strategies to guide students to better questioning. The following strategies promote:

- Deeper and more extensive questioning.
- An awareness that questions have different cognitive levels.
- Reflection about the students' own thinking.

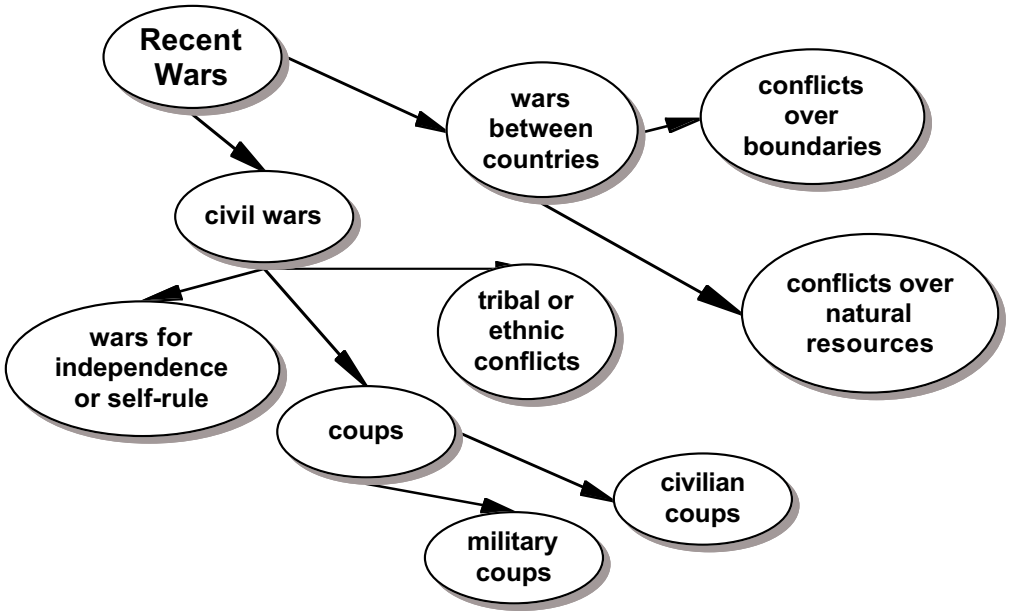
Thick and Thin Questions[1]

- Thin questions are close-ended and can usually be answered in a few words using a single source. They usually are asked to clarify confusion, understand words, or access objective content.
- Thick questions are open-ended, requiring long answers after further investigation and use of several resources. These address key concepts in content areas or are the global kinds questions that often begin with Why? How Come? or I wonder.

Students code for thick and thin questions as they read, using 3 x 3 sticky notes for thick questions and skinny flag notes for thin questions. Students write questions on the notes and post them next to the text that prompted the question.

Mind Mapping

Students create clusters of questions around a central question. This promotes not only additional questions, but an organizational strategy for research. Inspiration© is a phenomenal graphic organizing software that can be used for mind mapping.



1. Harvey, Stephanie and Anne Goudvis. *Strategies That Work: Teaching Comprehension to Enhance Understanding*. Stenhouse Publishers, 2000.

Question Matrix[1]

A question matrix is a graphic organizer to help students create a variety of questions around a topic:

	Event	*Situation*	*Choice*	*Person*	*Reason*	*Means*
Present	What is	Where/ when is	Which is	Who is	Why is	How is
Past	What did	Where/when did	Which did	Who did	Why did	How did
Possibility	What can	Where/when can	Which can	Who can	Why can	How can
Probability	What would	Where/when would	Which would	Who would	Why would	How would
Prediction	What will	Where/when will	Which will	Who will	Why will	How will
Imagination	What might	Where/when might	Which might	Who might	Why might	How might

Multiple Sources, Multiple Perspectives[2]

Students use this graphic organizer to explore how a variety of accounts of an event change their perceptions and questions. Sources might include poems, paintings, stories, reference books, magazine articles, film clips, and trade books.

Sources	Factual Information	Reading Between the Lines	Questions

Bloom's Taxonomy

Give students a list of key verbs associated with Bloom's Taxonomy. Have them create questions at several of the higher order levels:

Knowledge	**Comprehension**	**Application**	**Anaylysis**	**Synthesis**	**Evaluation**
What happened after…? How many…?Describe what happened… Who was it…? Where did the events take place?	What's the main idea? What is an example for…? What are the differences between…? How would you say this in your own words?	What are some other examples of the same…? How would this look in your own city? How would you group these by characteristics?	What was the theme of…? What were the motives of…? What was the turning point in this event? Why did these changes occur?	What would happen if…? Design a machine that will…What are the possible solutions to this problem? Write your version of…	Is this a good or bad…? What changes would you suggest…? How effective is…? What is the value of…?Is there a better way…?

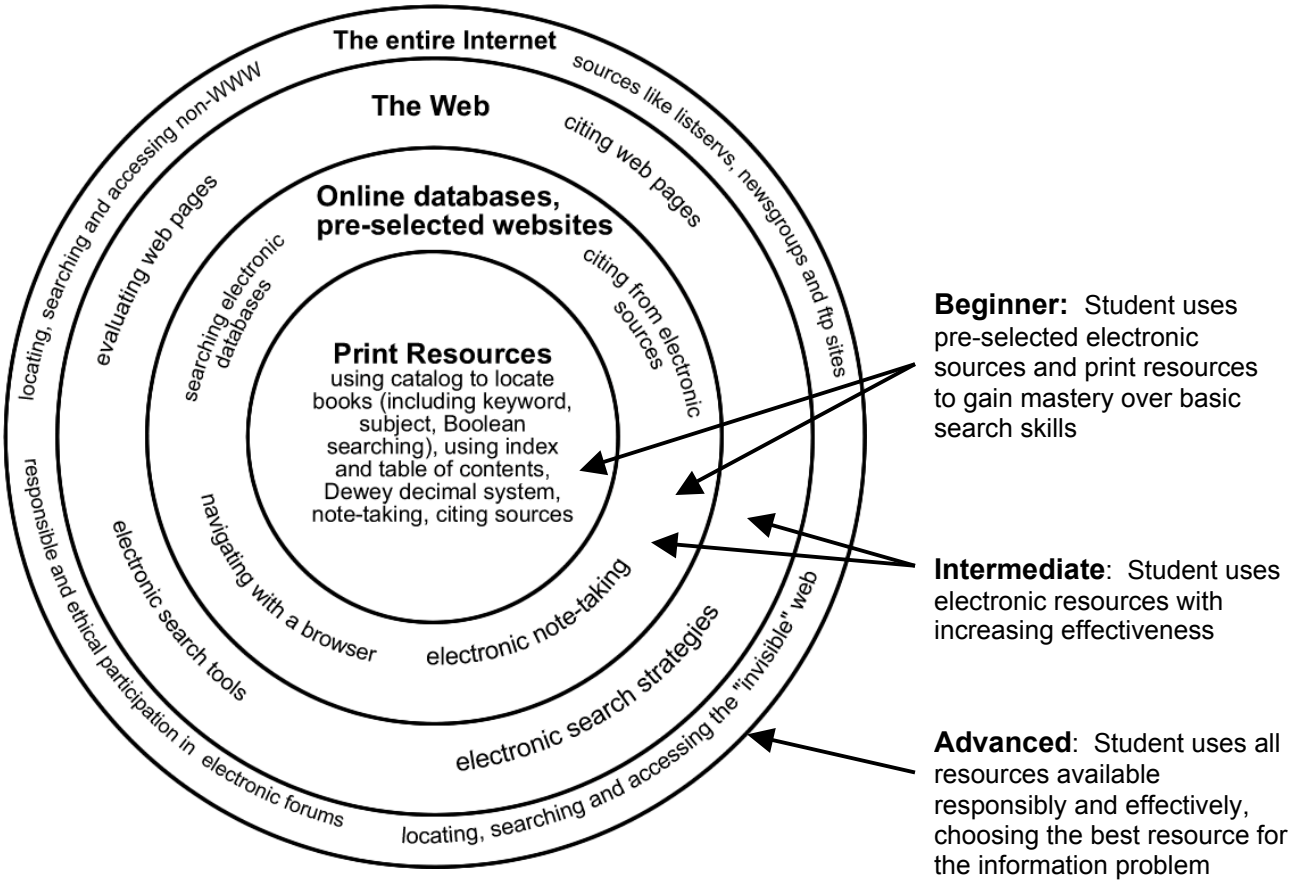
1. Wiederhold, C. *Cooperative Learning and Critical Thinking. The Question Matrix.* Resources for Teachers, 1991.
2. Allen, Janet. *Yellow Brick Roads: Shared and Guided Paths to Independent Reading 4-12.* Stenhouse Publishers, 2000.

Controlling Resources

Before the Internet, we bemoaned students' over-reliance on encyclopedias for their research. At first glance, electronic resources seem to present the opposite difficulty: students have too many resources from which to choose. In truth, the challenge is the same: students are often reluctant to look very deeply for answers. While students have millions of resources at their fingertips, they'll click through pages until their fingers fall off looking for something they can cut and paste into their own report, rather than synthesize the information from a few key sources to form a thoughtful response. Here is a two-step solution:

Step One: Create assignments that discourage cutting and pasting. If you ask students to summarize the key facts about a topic, they'll cut and paste. If you ask them to compare and contrast, speculate about future implications, evaluate an idea, or apply an idea to a new context, they may not *find* a web page they can copy. see pp. 19-22 for an expansion of this idea.

Step Two: Control the resources students use. Teach students how to use new resources a few at a time in the context of new assignments. Expand the pool of resources students can use as their ability to appropriately select and critically evaluate resources increases.



Here's an example of how the same content standard and essential question may be approached differently depending on the skills of the researchers. Note how the skill set becomes increasingly complex as access to electronic resources expands.

Content Standard: Students compare the present with the past, evaluating the consequences of past events and decisions and determining the lessons that were learned.

Essential Question: Some say our country remains wounded by the slavery experience and the Civil War. In what ways might this claim be true and in what ways untrue? What evidence can you supply to substantiate your case?

Level	Assignment	Skill Set
Beginner	Students locate reference materials both in print and from pre-selected web pages and online databases to gain background knowledge on American slavery and the Civil War, then brainstorm a list of possible long-term negative effects from slavery and the war. Students create lists of keywords for possible searches and locate circulating print resources on topics such as race relations, discrimination, minority rights, African-American accomplishments, etc.	• Create keywords. • Use the OPAC to locate reference resources. • Create Boolean searches to narrow or broaden searches. • Navigate using a browser. • Navigate online databases. • Use table of contents and index to locate useful information. • Skim and scan materials for helpful information. • Use a system for keeping track of sources. • Cite print and electronic sources.
Intermediate	Students include web pages, online newspaper and magazine articles, primary source documents, audio and video clips, and government statistics to support their findings. Students evaluate web pages for authority, accuracy, and bias. Students record online research using word processing software, and organize their findings using graphic organizing software.	• Evaluate web pages, choosing credible sites and noting political, social, historical biases of its authors. • Locate relevant information using a variety of searching strategies in online databases. • Sift and sort from a broader array of information sources. • Use word processor, graphic organizing software to more efficiently record notes and organize information.
Advanced	Students monitor online newsgroups on topics related to their findings, communicate via e-mail with experts, locate scholarly research in both public and private databases.	• Choose appropriate search tool for online search needs. • Used advanced features of online search tools to narrow searches by domain, file type, etc. • Locate sources from the "invisible" web. • Access and utilize scholarly databases available through local public libraries and colleges. • Sift and sort from a broader array of information sources.

Before You Tell Your Students to Use the Internet

The Internet is like a swamp: full of muck and yuck and filth, but a source of rich nutrients and splendid diversity, brimming with life. And it's hard to appreciate the beauty of a swamp without some training. Before you assign research to students and send them on their way with the suggestion, "Use books or the Internet for sources," consider the following questions and their implications for students:

Questions		Implications
Do my students know basic search strategies like forming keywords and synonyms, Boolean searching; and the different applications of search directories, search engines and metasearch engines?		Students may spend countless hours searching without finding anything. Or they may find too much information with no strategies for narrowing their search. Or out of frustration, they may extract information that doesn't fully satisfy their needs. Or they may give up.
Do my students know what online databases are available to them through our school library, district, public, or academic library? Do they know which databases are useful for particular kinds of searches? Do they know how to use the search features of these databases? Do they know how to access them at home?		Students may be passing by the most reliable, useful, easily located resources available for their assignment.
Do my students know how to evaluate a website? Can they determine whether the author is credible? Can they detect and articulate its bias? Do they have tools to help them determine the accuracy of the information? Do they consider the currency of the information?		Since they were directed to "use the Internet" as a source and never asked to evaluate sites critically, they may conclude that if it's on the Internet, it's reliable. Or, they may decide that they don't really care if it's reliable, since nobody is stressing this. Or, questions of reliability may never occur to them at all.
Do I have requirements and procedures in place to make sure students actually do evaluate the sites they use?		Students may not evaluate sites, even if they know how. They may not see the importance of choosing quality sources in solving information problems. This may become a pattern that makes them less capable as lifelong learners.

Work with your LMS to teach the skills students need to use the Internet wisely.

Website Evaluation Guide for Students

Use this guide to help you decide whether or not the web pages you are viewing are reliable sources for research. Need help? Ask your library media specialist!

Author:	Based on the information you found about the author, rate this source:
Who is the author? (Can't find a name? Look at the top and bottom of the page. Click through other pages on the site looking for an author).	**Credible**
What makes the author an expert on this topic? What do you learn about the author's **occupation**, years of **experience**, **education**, or other facts that make him an expert?	**Not Credible**
List any **connection the author has to a university, research laboratory, governmental agency, or other reputable organization** related to the topic.	

Purpose:	Based on what you found out about the purpose, rate this source:
What is the **purpose of the website**? To **sell** something? To **provide information**? To **convince** you of something? What does the **domain name** (.com, .gov, .org, .edu, .info) tell you about the purpose of the site?	**Biased**
If only **one side of the argument** is presented, what side is left out?	**Not Biased**
What is **another resource** or type of resource that might provide the **other side** of the story?	

Accuracy:	This information is
Note any **obvious errors** on the page, including **spelling** or **grammar** errors. What does this suggest about care in producing the page?	**Accurate**
How does the **information factually compare to information from other sources** you've already read?	**Not Accurate**

Content and Currency:	This information is
If statistics are provided, **how old is the data**?	**Current**
How **recent is the other information** on the page? Does this make the information more or less valuable?	**Cited**
When was the page **written**? **When** was it last **revised**?	**Not Current**
Does the author provide a **bibliography, Works Cited page or footnotes** that tell us where he got the information?	**Not Cited**

Summary:	The best reasons for using or rejecting this website are:

How to Stop Your Students from Cutting and Pasting: Teach Them How to Cut and Paste

Why fight students' urge to cut and paste? Why not take advantage of the technology to move students beyond copying to actually processing the information they collect?

Here's how:

1. **Create two templates, "Electronic Sources Cited" and "Electronic Note-taking Form."** Work with your LMS to construct forms appropriate to your level of student. A model of each is given on the following pages.

2. Ask your webmaster, LMS, technology coordinator or network administrator to **load the templates on your school's server**. If the library has a web page, load it there, as students will then be close to the templates *and* the resources they're using (If your school doesn't have a server or your webmaster is a control freak, copy the templates onto each computer's desktop **or place them on a floppy disk for each student**).

3. **Students open both "Electronic Sources Cited" and "Electronic Note-taking Form" and save them under their own names** (or according to other directions you give them).

4. For each source students use, they open the "Electronic Sources Cited" and enter required information. They can type or cut and paste, but I recommend they at least cut and paste the URLs, as these often get copied incorrectly.

5. **Students begin reading sources, cutting and pasting key sentences** or paragraphs into the left column of the "Electronic Note-taking Form." In the right hand column, they **paraphrase and/or write a response to the passage they copied**.

6. **Students create final products using primarily the notes they wrote in the response column,** but also direct quotes from passages they cut and pasted into the "Electronic Note-taking Form."

7. **Students turn in "Electronic Sources Cited" and Electronic Note-taking Form" along with their final product.**

The result: Students use the technology of cut and paste to take notes and prepare bibliographies quickly, leaving more time for them to process the information they are gathering.

Variations:

- ➔ Make the response column to the Electronic Note-taking form more guided with specific questions.
- ➔ Have students cut and paste key passages, then print the Electronic Note-taking form and have them hand-write their responses.
- ➔ Combine note-taking and Electronic Sources Cited forms into one, using a separate page or file for each source.

Electronic Sources Cited

Complete the form below for each source you use. Provide all the information available from the source. If you have more items than four, copy and paste more boxes.

Citing Web Pages	
Source#	
	Author (if any)
	Title of web page:
	Title of web site (if different from page)
	Last updated (or copyright date)
	URL (web address)

Citing Web Pages	
Source#	
	Author (if any)
	Title of web page:
	Title of web site (if different from page)
	Last updated (or copyright date)
	URL (web address)

Citing Online Databases	
Source#	
	Author (if any):
	Title of article:
	Name of original source:
	Page numbers (if any):
	Date of publication:
	Name of database (SIRS, Proquest, etc.):
	URL of database (web address):

Citing Online Databases	
Source#	
	Author (if any):
	Title of article:
	Name of original source:
	Page numbers (if any):
	Date of publication:
	Name of database (SIRS, Proquest, etc.):
	URL of database (web address):

Electronic Note-taking Form

Use this form for taking notes. Enter information for each source on the "Electronic Sources Cited" form. Here, include the number of that source, copy passages directly onto this page, and include a response about what the passage means to you or why it is important. Save notes as your last name + "notes." Example: garcianotes

Source #	Passage	What this passage means to me/ Why this is important

Stopping Plagiarism: An Ounce of Prevention

While it's important to teach students about academic honesty, while we need tools to detect student copying, and while we need clear consequences for transgressions, many of the problems associated with plagiarism can be stopped before they start. How? Effective planning and intervention.

Effective Planning:

Strategy 1: Create good questions.
If you ask only for a collection of facts or for explanations of events that have already been well-studied, and for which many explanations have already been established, you offer ample opportunity for plagiarism. Ask students to collect information in order to create something new from it: rather that report on the features of an ancient culture, compare the features of that culture to those of your school, town, or state. Rather than asking students to explain the causes some major event, have them speculate about why some other outcome did not occur, or how the world would be different had that event not occurred. See p. 7 and pp. 19-22.

Strategy 2: Teach data collection and management strategies that keep your students' ideas separate from their sources.

Teach students to:

- **Make photocopies or digital copies of all resources they use.** As they read, have them highlight all key ideas. These are turned in with the final product. If a digital source, these can be attached electronically.

• Use different colors of ink to take notes. Red = source of information. Blue = my paraphrase of the text. Green =direct quote of text.

• Cut and paste bibliographic information and key passages into a word processing document. Key passages are in one column, and the student's thoughts and reactions to the passage are in another. See "How to Stop Your Students from Cutting and Pasting," p. 48 and "Electronic Note-Taking Form, p. 50.

Intervention:
Procrastination encourages plagiarism. If you check students' work along the way and build in mini-deadlines for checking notes and portions of students' drafts, you can:

- help students manage their time.
- discourage last-minute panic plagiarism.
- encourage slackers to snap out of it.
- provide just-in-time coaching on managing note-taking to avoid plagiarism.

Teach Text Structure – It Saves Time

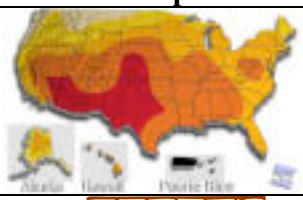
Students can often navigate faster through a printed resource than they can a web site if they understand some tricks about how text resources are usually structured. Try teaching:

Text Feature	How it Helps
Table of contents leading to chapter titles	Quickly flip to the topic of interest. Also, check its companion, the index. The table of contents is almost always at the beginning of the book.
Topics or chapter titles (1st level heads) usually in bold and large print	They tell us what the chapter is about.
Conclusions	Read this first to see what the chapter has been about – get the big idea.
Sub topics (2nd level heads) usually in bold but not quite as big as chapter titles	Best summary of big ideas covered in the chapter.
Sub sub topics (3rd and 4th level heads) smaller still but distinctive in some way such as Italics	Provide the eye with important subsections of the text that can be read without reading the rest of the text just to get an idea what is being covered. Helps with the "big picture" and helps understand the body of the text. These follow the old rules for outlining.
Lists (bulleted or numbered)	Detailed points to pay attention to.
Charts, graphs, tables, pictures	Read them quickly at first to get the big idea – then go back and study them to make more sense and build understanding.
Bolds or underlines	Indicate ideas the author wants to stress as important.
Navigational helps such as guide words or arrows, or directional notes	Help you find what page you should be looking on.
Topic sentences	Skim these first for the big ideas, come back and read more carefully as needed.
Sidebars	These boxes or illustrations in the margins spotlight examples, definitions, or provide additional information.
Footnotes and endnotes	Provide the sources the author used. Also help determine the author's point of view.
Indexes	Usually to be consulted first to find an information nugget you already know about. It's a companion to the table of contents. The index is usually the last thing in a book – however, some are in the middle or in a separate volume if you are looking at a set of books.

Teaching idea: Photocopy the first page of a chapter with lots of text structure, black out the key elements such as titles, subtopics, graphs, etc. Ask students to predict what those elements are and then compare those with the original.

Use LMC Information to See the Big Picture (Analysis of Information)

When learners fit the data they collect into a big picture, their understanding is deepened and they will score higher. Below are just a few examples:

Library Information Source	Big Picture	Example
Facts from reference books or the Internet such as temperature data.	A Map or graphic illustration created using the data points.	
Facts from reference books, databases, the Internet such as population figures over time.	Charts, graphs, tables, trends, poll results.	
Articles from databases or the Internet that present ideas, positions, trends, or possibilities.	Comparisons, discoveries, conclusions, judgments, decisions, Ah-ha's! (I get it!)	

Method: Individuals or groups collect data and then combine them on a physical or digital chart, map, matrix, or jigsaw.

Big Picture questions:

What's the point?
Why does this make a difference?
Meaning what?
What if?
What can we figure out?
So what do you think?
Does anyone see a pattern?
What does this suggest about the future?

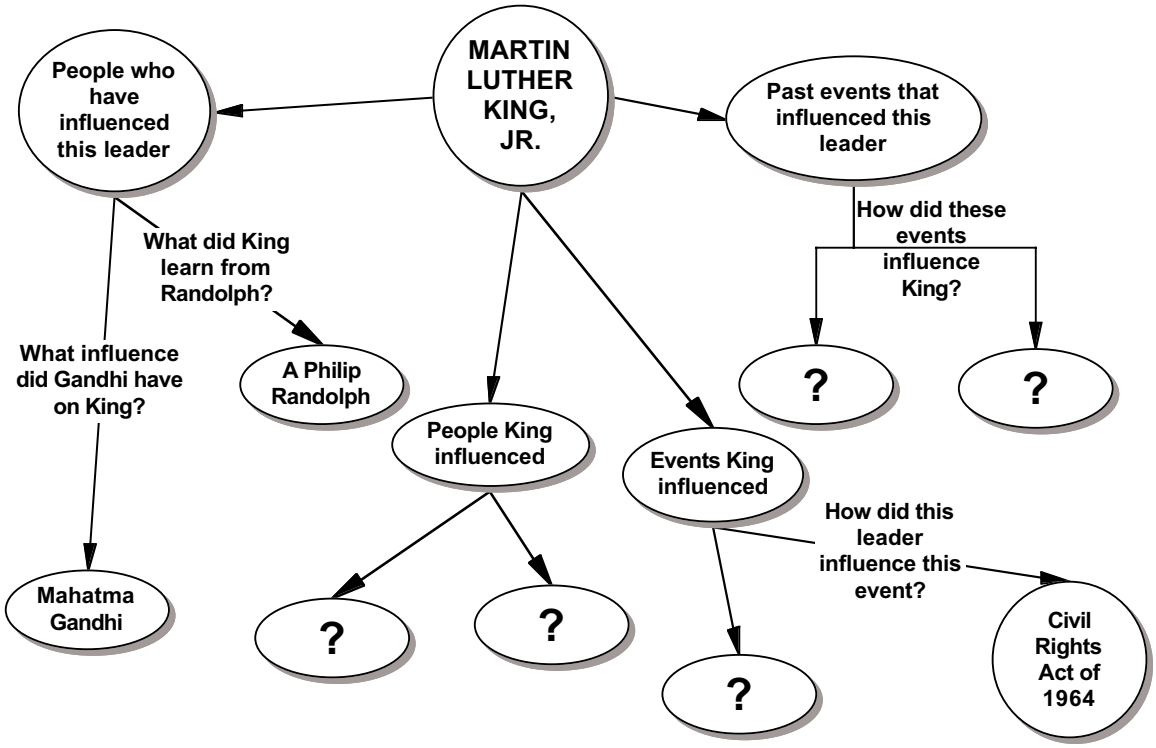
Teaching idea: Ask the library media specialist to help create the data analysis activity as a part of the research project. Students will enjoy entering data into a computer program that will perform the transformation.

Use Concept Maps to Help Define and Clarify a Topic

At the beginning of the research project, students can fill in a pre-printed concept map using prior knowledge. In places where students can't write information, they write a question. Questions become the basis for their research and allow students to see how their own inquiry fits into a bigger picture.

Work with your library media specialist to determine when using a concept map would best help students define and clarify a topic.

Example from Social Studies:
Essential Question: History does not happen in a vacuum. Show how a key figure in the Civil Rights movement was influenced by past people and events, and how that person influenced future leaders and events.



The concept map can reveal to students where they still have questions and where their knowledge is already well-formed.

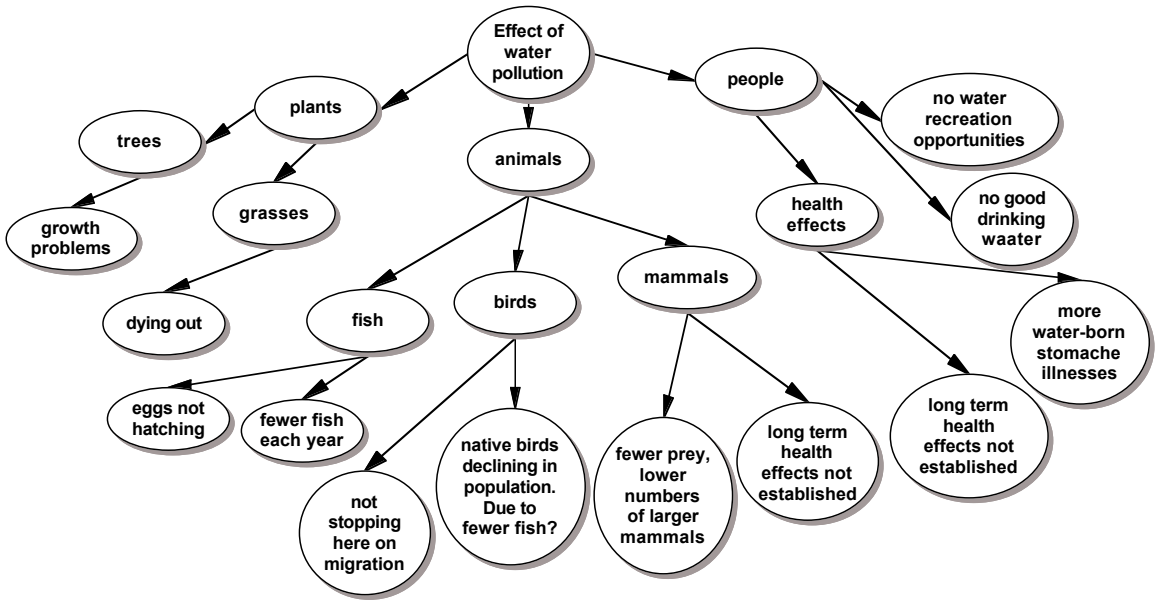
Use Concepts Maps to Sort and Organize Information

If students are recording information on index cards, they can arrange the cards into a concept map on butcher paper. If they're recording notes electronically, they can cut and paste into graphic organizing software such as Inspiration©. The connections help students prioritize and order information and create logical transitions between ideas.

Work with your library media specialist to determine when using a concept map would best help students sort and organize information.

Example from Biology:

Essential Question: Pollution does not just affect people. Determine the effect of water pollution on humans as well as the major plant and animal species in the coastal zone nearest to where you live.



Concept maps can provide a means for students to organize and sort the large amounts of information they may gather.

Use Concept Maps to Analyze or Synthesize Information

When students are researching different topics around a common theme, students can collaborate with classmates to create a concept map linking their ideas together to form new understanding.

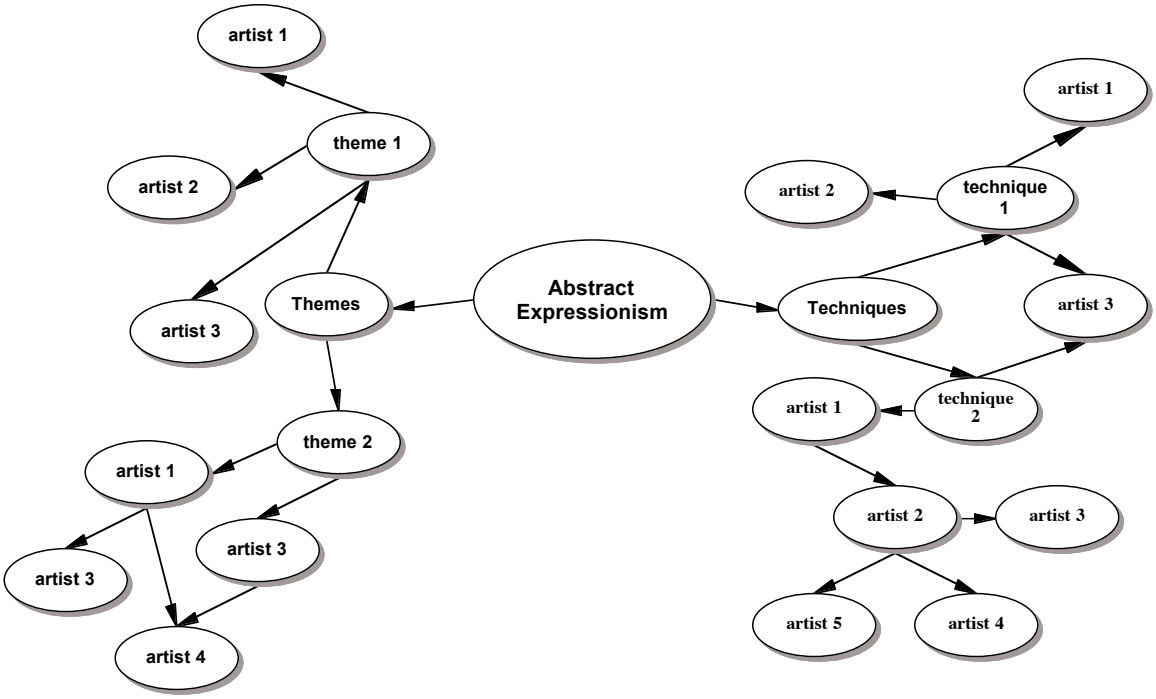
Early on, the teacher, the whole class, or the smaller groups must decide upon some criteria for selecting information, so that when groups reconvene, students have a common basis for discussion and can place their own findings in the context of the larger theme.

Work with your library media specialist to determine when using a concept map would best help students analyze or synthesize information.

Example from Art History:

Abstract Expressionism was an important artistic movement in the mid-20th century. Study a single artist's style in that period, noting common themes and techniques from several works. Working with your group, place your artist in the context of the larger movement. How are the artist's themes and techniques similar and/or different from others'? Where does the artist rank in importance within the group? Whom did he influence? By whom was the artist influenced?

As the skills of the learners develop, the teacher can withdraw aides such as the overall structure of the concept and labels for the key divisions within the map. Ultimately, the students decide for themselves the structure, the labels, and the connections among the parts of the concept map.



Try this: After your next research assignment, have students draw a concept map of their own research process.

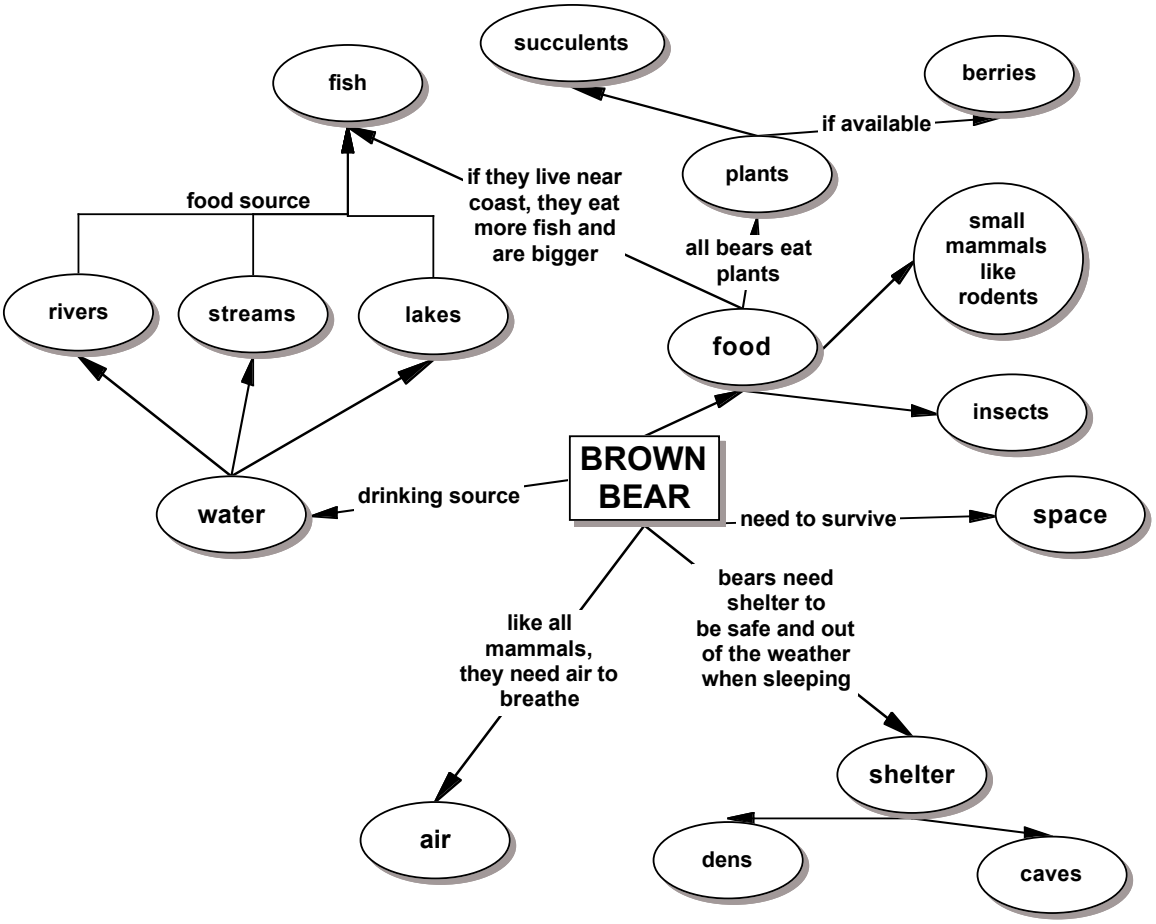
Use Concept Maps for Assessment

Concept maps can also be used at the end of a unit as an assessment tool. A concept map is an alternative method of assessing that is less language dependent than essays, oral reports, and other traditional kinds of tests. Concept maps provide a visual map of the student's thinking and help demonstrate whether or not students get "the big picture."

Work with your library media specialist to determine when using a concept map would best be used to assess students' mastery of process and content.

Example from Science:

After researching a mammal that lives in the wild in your part of the country, draw a concept map that shows the basic needs of that animal and how it meets those needs.



Try this: Team with your library media specialist to coach individuals until they have the capability of using concept maps for assessment.

Determining Bias in Sources

Considering the unfiltered access to so much information, teaching students to detect biases in sources is more important than ever. Work with your LMS to create lessons that build on students' increasing ability to recognize the biases of both print and non-print media.

- Propaganda lessons, in which students learn to recognize persuasive techniques in advertising and politics, offer an engaging entrance into the notion of bias:
  - ⇒ Provide students examples of advertising using common propaganda strategies such as euphemism, overgeneralization, celebrity testimonial, band wagon, fear tactics, etc.
  - ⇒ Have students identify these techniques in analyzing new advertisements.
  - ⇒ Have students create their own advertisements for new products, using these techniques.

- Offer non-verbal examples of propaganda, too. Cigarette and liquor advertisements are full of implications and assumptions linking their productions to wealth, sex, status and power. Ask students to look for information that the advertisements exclude, as well as for what they include.

- Ask your LMS to help you assemble newspapers that allow you to compare and contrast two or more news organizations' coverage of the same event. Teach students to identify exaggerations, charged words, and other evidence of bias.

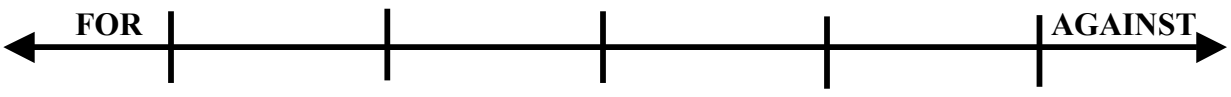
- When viewing web pages, teach students to recognize the domain names of URL's:

.com, .net., .biz = commercial	.edu = education
.org = non-profit	.k12 = school
.gov = government	.mil = military
.info = unrestricted use	.name = individuals

  Ask students to connect the purpose of the website with its domain name. Is part of the purpose of a site to sell you on one side of an argument? Is there a hidden message?

- With your students, view advocacy web pages with opposite positions, such as the National Rifle Association and a prominent gun control group. Examine not only their positions and messages, but the strategies they use to communicate their message. Ask students to analyze another pair of pages independently or in small groups.

- Have students place authors, publications, activists groups, political candidates, etc., along a continuum from one extreme to the other, then provide reasons for their placements:



Detecting bias is a difficult skill to master. Work with your LMS to gather a variety of sources in all media types and give this topic repeated attention over time.

A Critical Thinker

Library media specialists see critical thinking as one of the major components of the information literate person. But instead of advocating an add-on to the curriculum—a new scope and sequence or curriculum to be taught—critical thinking is best integrated into the subjects and projects at hand.

Teachers and library media specialists should teach critical thinking strategies within the context of content-area projects, lessons, and information use. The objective is to create neither students who are sponges (believing everything they read, view, and hear), nor cynics (believing nothing they read, view, and hear), but healthy skeptics (using evidence and authoritative sources to judge believability).

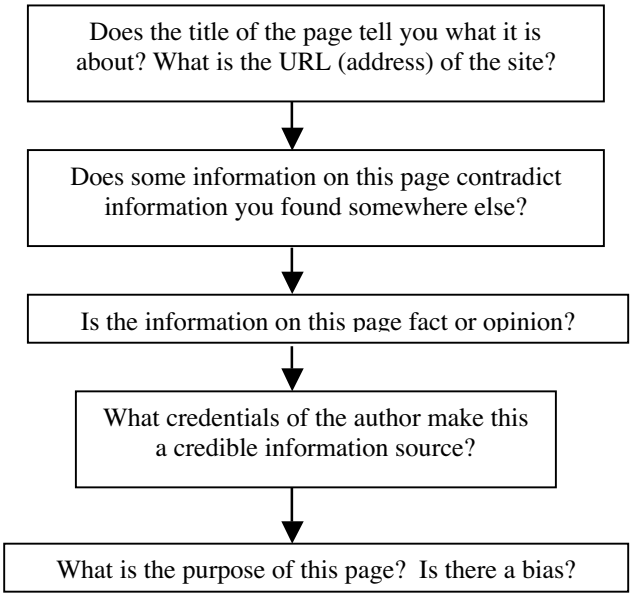
CRITICAL THINKING CONTINUUM

Sponges - - - - - - - - - - Healthy Skeptics - - - - - - - - - - Cynics

A Major Challenge: Evaluating Information on the Internet

One of the major challenges, for example, is to educate students to evaluate information they find on the Internet. Teachers and library media specialists should work together to teach students these evaluative skills developmentally. Very young users may simply be asked to decide whether a site seems to be on the right topic or whether it is easy to understand. As students develop cognitively and become more sophisticated in their use of online resources, teachers and library media specialists should respond with increasingly sophisticated lessons about authority, bias, currency and accuracy.

As Students Become More Sophisticated, So Do the Questions We Ask of Them



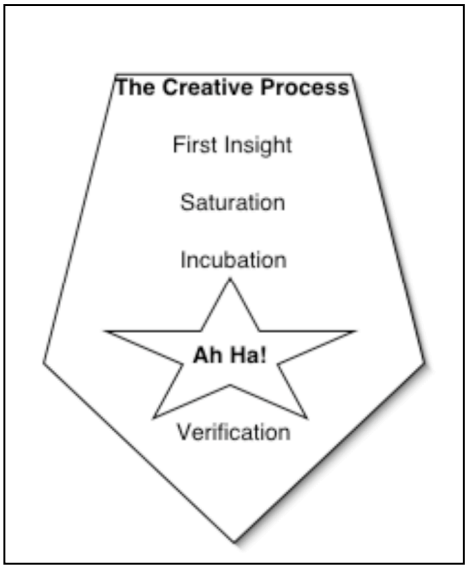
Resources for Web Evaluation

1. "Critical Evaluation Information," by Kathy Schrock. Available: http://school.discovery.com/schrockguide/eval.html
2. Cyber Guides, by Linda Joseph. Available: http://www.cyberbee.com/guides.html
3. Infopeople's "Evaluating Internet Resources." Available: http://infopeople.org/how to/bkmk/select.html
4. "Teaching Critical Evaluation Skills for World Wide Web Resources," by Jane Alexander and Marsha Tate. Available: http://www2.widener.edu/Wolfgram-Memorial-Library/ webevaluation/webeval.htm

On p. 47 is a web evaluation guide. Work with your library media specialist to adapt the guide to fit your students' needs and create a lesson that helps them learn how to use it. Integrate that lesson into a broader research unit. Teach information literacy in context!

A Creative Thinker

Learning is often so regimented with students receiving points for molding projects to exact specifications that creativity is penalized. Recognizing and rewarding creative thinking even when the student might act like Jim Carey or Robin Williams is a major challenge. Is it being encouraged in collaborative units in the library media center? Consider the definition of creativity at the right[1] and a statement concerning inventive thinking from enGauge:[2]



Inventive Thinking

- Adaptability;Managing Complexity
- Curiosity, Creativity, and Risk Taking
- Higher-order Thinking and Sound Reasoning

The call from high-technology employers for a workforce that can think, learn, and create, together with the new science of learning based on brain research, suggests that students need to develop the self-confidence and motivation to engage independently in learning, exploring, and creatively thinking as a daily activity.

Behemoth Jet: An aircraft manufacturer has just built the largest passenger plane in the world. It is the length of four football fields and is the height of a 10-story building. It is more streamlined than any existing passenger plane. There are nine levels in the passenger compartment, and when fully loaded the plane will carry 12,000 passengers and 86 crew members. Eight enormous jet engines on each wing and three on the tail power the plane. Each of the 24 tires on the landing gear is too large to fit into a typical school classroom. What transportation problems would this new plane solve? What new problems might it create? (Ambrose, Don: *Imagitronics*. Zepher Press, 2001, p.58-59)

A Science Example:

Indiana Science Standard 5.1.5 Explain that technology extends the ability of people to make a positive and/or negative changes in the world.

Checklist

- ❑ LMC plans encourage learner creativity.
- ❑ Rubrics include creativity items.

[1] The creative process is Getzel/Kneller's description in von Wodtke, Mark. *Mind Over Media: Creative Thinking Skills for Electronic Media*. New York: McGraw-Hill, 1993, p. 115.

[2] *NCREL's enGauge: 21st Century Skills: Digital Literacies for a Digital Age*. Naperville, IL: NCREL, 2002, p. 23.

Teaching Synthesis in the Research Project

In a research project, synthesis is where the rubber meets the road. It is not enough to collect mountains of information and summarize it for the teacher. Students need to gather, sort, organize and regroup that information to construct new meaning in a way that builds on what they have learned. This is the essence of synthesis. Your library media specialist can partner with you to guide students successfully through this higher level activity.

Tips for Teaching Synthesis	How the Library Media Specialist Can Help You
Ask the right question. Ask students to create, invent, compose, predict, plan, devise, propose, construct, substitute, modify, integrate, generalize…See pp. 7, 19-22, 53.	• Do "advanced scouting" for topics and resources. • Help devise questions. • Provide advice on available resources. • Suggest questions based on skills of students.
Teach synthesis as part of the research process. Synthesis requires students to construct new meaning from information they collect. It does not happen in the absence of many other thinking and doing activities. Using a research process model helps structure the activities that must precede synthesis.	• Team with teacher to teach synthesis as a thinking skill important to the research process. • Suggest a variety of research process models or assist in creating a new model to use for the unit. • Assist in planning units to integrate the research process. • Teach information literacy skills from the model.
Provide extra help in sorting and organizing information. These stages are critical for students to be able to review and analyze their data before they begin to rearrange it into something new. See 42-43, 48-50, pp.54-57.	• Suggest and develop graphic organizers and other sorting and organizing aides. • Provide "just in time" training to sort and organize information using technology. • Team with teacher to coach students as they sort and organize their information.
Choose the format of the final product carefully. Consider the students' own abilities, the nature of the information, the audience, and the purpose. With older students, help them make that decision for themselves.	• Suggest final products in planning the unit. • Provide "just in time" training for technology used to create final products. • Team with teacher to help students choose the format of their final product carefully.
Ask students to show their planning. Ask them to outline, create a graphic organizer, create storyboards or other plans of their final product. Synthesis involves much discovery, and there are generally many false starts and dead ends along the way. Much of this can be worked out in the planning process.	• Suggest and develop graphic organizers and other planning aides. • Provide "just in time" training for planning tools that use technology. • Team with teacher to coach students as they plan their products.
Ask students for rough drafts. Require feedback from peers, the teacher, and the library media specialist before a final product is begun.	• Help teacher develop feedback forms that incorporate all stages of the research process. • Evaluate students' rough drafts and provide feedback. • Team with teacher to coach students in the creation of their rough drafts.

Synthesis Checklist

- ❑ Why is this important?
- ❑ Is this information already common knowledge?
- ❑ Has the author examined this topic in a new way?
- ❑ Does this information extend or build on what was already known?
- ❑ Does this relate knowledge from several areas?

Decision-Making in an Information-Rich Environment

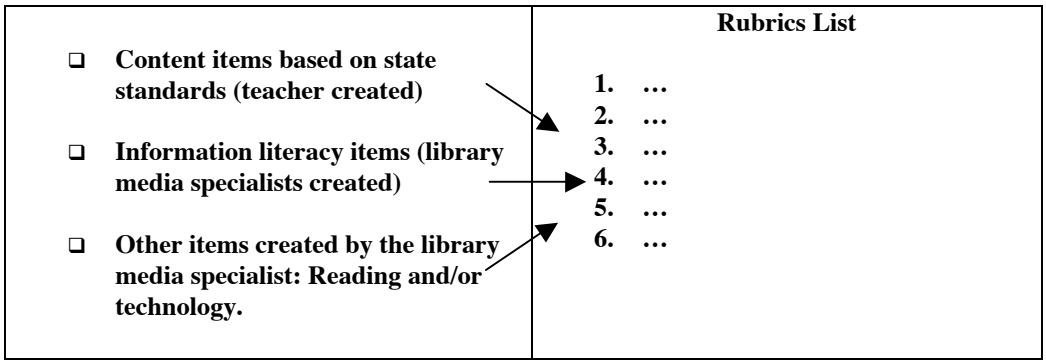
In today's information-rich environment, students need help considering both the quantity and quality of information used in making a sound decision. A graphic organizer like the one below can help students manage the information they gather and guide them through the decision-making process. Your library media specialist can help you design a similar organizer and suggest kinds and quantities of information sources your students might need to make a quality decision.

Making A Decision

<table>
<tr><td colspan="2">Problem:</td><td>Goal:</td></tr>
<tr><td>Alternatives</td><td>Pros + & Cons -</td><td>Information Sources</td></tr>
<tr><td rowspan="2">1</td><td>+</td><td rowspan="2"></td></tr>
<tr><td>-</td></tr>
<tr><td rowspan="2">2</td><td>+</td><td rowspan="2"></td></tr>
<tr><td>-</td></tr>
<tr><td rowspan="2">3</td><td>+</td><td rowspan="2"></td></tr>
<tr><td>-</td></tr>
<tr><td colspan="2">Decision:</td><td rowspan="2">Information Check:
❑ Did I search broadly across several kinds of sources?
❑ Did I consider the biases of each source?
❑ Is there another source I should consider?</td></tr>
<tr><td colspan="2">Reasons:</td></tr>
</table>

Build a Joint Rubric

During the unit planning process, the teacher/library media specialist team first identifies what state standards are to be achieved. Then together, they create a rubric that covers the teacher's concerns and adds the library media specialist's concerns for information literacy, reading and technology as illustrated below:



For students, the team may wish to create a self-assessment rubric to be completed by students or learning groups. This rubric can be the same as the above rubric or adapted for self-rating. As an example, suppose the library media specialist wanted to teach and assess **analysis** as part of a history timeline project. The following two rubric items might be on the joint list:

3	Historical events our group gathered were checked and rechecked for placement on our timeline.
2	We did some checking of the facts on our timeline, but ran out of time.
1	We did not have time to check any of our facts on our timeline.

3	During the checking of our historical facts, we found that one/several sites had bad information so we eliminated all information from that source on our timeline.
2	We noticed that some Internet sites had conflicting information from other sites. We did not have time to check which were right so just guessed at which facts to include on our timeline.
1	We used information for our timeline from any source we accessed on the Web.

For scoring, the library media specialist might score the information literacy items and the teacher the teacher-created items. This might happen until both partners could score projects at which time the teacher might take over the assessment and the team moves on to building another topic together.

Match the Product You Assign to the Standard

A steady diet of the same project over time produces bored learners. They may experience death by PowerPoint, book reports out the kazoo ("Oh no, not another 3-page report"), and posters, posters, posters.

Work with your library media specialist to provide a variety of products but also ones that further state standards you are trying to achieve. Consider the following table of ideas:

Characteristic	Possible Products
When writing is important	▪ Reports ▪ Term papers ▪ Position or issue papers ▪ Stories/drama/poetry ▪ Portfolios
When analysis and synthesis is important	▪ PowerPoint presentations ▪ Mind maps, graphic organizers ▪ Portfolios ▪ Charts, diagrams, maps ▪ Timelines ▪ Transformations of data from one form to another
When reality is important	▪ Decisions ▪ Debates ▪ Panels ▪ Inventions, constructing something ▪ Solutions to problems ▪ Performances ▪ Artistic renderings ▪ Videos/multimedia ▪ Re-enactments or role play

Teaching idea: Anytime a learner is asked to **transform** data or information from one form to another—from one presentation of **sense** to another, deep learning occurs. Examples:

- Transform narrative into a bulleted list.
- Transform the sense of a temperature map into a narrative interpretation.
- Recreate a historical event as a dramatic presentation.
- Transform information from one classified form into a different classification.
- Transform literature into a different genre (a play into a story; a story into reader's theatre, a tragic news report into poetry).

Promote Student Publishing

Encouraging learners to publish their own writing whether on the web or in print format provides many benefits. One such example is the *Tales by the Schoolside* book published by the staff and students of Sarah Scott Middle School in Vigo County Indiana. Every teacher and administrator of the school paired with a learner to produce a collection of original writings illustrated by student artists. The resulting book made this a memorable learning experience and a family keepsake. Here are a few tips for creating such a program.

Getting Started

- "Empower Student Learning with Web Publishing" by Tammy Payton includes information on how to get started, links to AUPs for elementary and secondary, links to student writing, web page evaluation and more. Google: "About Tammy Payton"
- Loogootee Community Schools in Loogootee Indiana – "Permission to Publish Student Work" form. Google: "About Tammy Payton"
- **Connected Classroom** web site on student publishing provides links to evaluation rubrics and examples of student writing. Google: "Connected Classroom"

Examples of Student Writing Published Online

- Online activities developed by 1st and 2nd graders at Loogootee Elementary. Reindeer IN. Google the school name.
- Clark Elementary School 2nd graders in Whiteland Indiana Adjectives. At: http://homepage.mac.com/gwagoner231/grade2/adjectiveartlist.html
- Students, ages 8-12, in Mrs. Joan Globe's Media Club interviewed Cannelton residents and created "Echoes of Cannelton" to preserve the town's history. At: www.siec.k12.in.us/cannelton/echoes/narritive.htm

Places Students Can Publish

- **Kids Bookshelf** - Publishes student stories, poems and book reviews. At: http://www.kidsbookshelf.com/index.asp
- **Kids'Space** – A place kids can share stories, pictures and music online. At: http://www.kids-space.org/navi/about.html
- **MidLink Magazine** - The Digital Magazine by Students, for Students - Ages 8 – 18. At: http://longwood.cs.ucf.edu/~MidLink/
- **Publishing Student Work On-line** - A collection of web sites containing student work online. At: http://k12science.ati.stevens-tech.edu/tutorials/studentpub/resources.htm
- **Scholastic's Writing With Writers** - Online workshops for students, with various writers. At: http://teacher.scholastic.com/writewit/index.htm
- **Stone Soup Magazine.** At: http://www.stonesoup.com/
- **The Young Writers' Club** - An on-line club that aims to encourage children of all ages to enjoy writing as a creative pastime by getting them to share their work and help each other improve their writing abilities. At: http://www.cs.bilkent.edu.tr/~david/derya/ywc.html

Idea: Make the library media center the place to store learner-written books for circulation, a digitization center for archival storage, and the central index of digital work with full-text access.

An Effective Communicator

Students should be able to express themselves and communicate their findings successfully in a wide variety of media including:

- Written reports
- Term papers
- Web sites
- Multimedia presentations
- Video presentations
- Graphic charts, diagrams, maps, PowerPoint presentations, etc.
- Real and constructed objects
- Reenactments, drama, oral presentations
- Portfolios

Student products should not only span the various types of media, but should become increasingly sophisticated as their experience with technology increases. Student products should be evaluated by some form of joint rubric constructed by the teacher and library media specialist. Here is a sample partial rubric:

My product:

- Reports clearly the question or quest.
- Reports the various information sources I used.
- Draws from excellent information sources.
- Reflects my thinking about the topic covered.
- Is a summary of what I have learned.
- Uses technology well.
- Is neat and organized.
- Is presented well.

Student products should be a part of exhibitions to parents, teachers, or might have utilitarian value for other students. Such events encourage students to demonstrate deep learning vs. surface learning—an expectation that encourages a behavior teachers would like to maximize.

For the most part, students should be taught how to communicate in the various media at the time when they need the skill. For example, they can be taught to use the digital camera before a field trip where they will be taking pictures to integrate into a multimedia presentation. In this case, a few students can be taught the skill, and they can be assigned the responsibility to train others—to "check them out" before handing over an expensive piece of equipment.

In addition to using the library media center for its information resources, remember that it can be exploited as a make-and-take center. Most library media centers have large tables, quiet rooms, and a wealth of production tools from scissors and tape to computers and video editing equipment.

Reflecting With Students: A Learning Unit Level Assessment

Why Reflect?
Frank discussions and reflections with learners can provide a great deal of valuable feedback from learners as they try to use technology to accomplish their assignments. Being a coach rather than a dictator can be quite beneficial as systems are created, maintained, and modified.

Who would conduct the reflection?
A mix of the teachers, administrators, the library media specialist, the technology specialist, plus the learners themselves.

When should the reflection happen?
- After a learning activity where technology, information systems, LMC facilities and resources were a critical part of the learning experience.
- After the grades are in. (Students should feel free to speak up.)
- After an assessment where learners had to demonstrate their knowledge or what they did.

What questions might be constructed to ask during a reflection?
Each reflection will have its own set of questions, but the list below is suggestive of topics to broach and adapt to any grade level:
- Here is the state standard/local expectation that we as teachers had for this learning experience (list those used by all teachers and specialists across the various curricular standards). How well do you feel we did as a group in meeting those objectives?
- How well did a certain technology help you as a learner?
- What information sources or systems seemed to help you the most?
- What problems did you encounter with either a technology or information sources?
- What could we do to make sure that technology and information sources serve us better in our future projects?
- How could you help the process more as learners?

How sophisticated should the reflection be?
Tailor the reflection to the maturation level and student experience using technology.

How much time should it take?
Reflections might be as short as ten minutes or as long as a half hour depending on the complexity of the learning activity, the difficulties encountered, and the sophistication level of the learners.

- **What should happen after the reflection?**
- Meet with the other adults involved to plan any changes in program.
- Document the reflection as a part of an assessment of the impact of the LMC program.

Bottom Line Questions

- What is the sophistication level of the students in their use of technology?
- Is the use of technology really enhancing the learning experience?

Logging and Assessing the Investigative Experience: A Sample Form

During a major research project, have learners track their progress and evaluate themselves on the rubric created for the assignment. Create a form for your own learners.

My Research Log

My name: _____ Assignment title: _____
(Make a list/log of what you did first, next, next, etc. Include comments about problems you had.)

Self-Assessment Rubric (Am I an organized investigator? And, am I making improvement?) ▪ ▪ ▪ ▪ ▪ ▪ ▪ ▪ **_____My Score**	**Comments**	**Teacher/LMS Rubric** Your work will be judged on the following rubric criteria: ▪ ▪ ▪ ▪ ▪ ▪ ▪ **_____ Your Score**

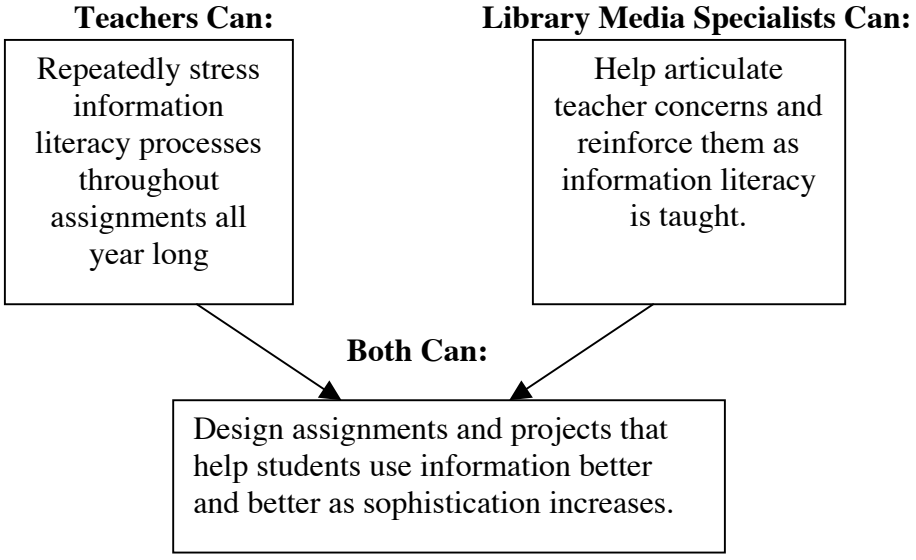
A Responsible Information User

When only a textbook, some note paper, and a few library reference books were available as the chief student information sources, the need to teach responsible information use was not a common part of education. Now, however, as the information pool deepens, students of all ages handle vast quantities of information resources and with this opportunity comes more responsibility. Consider the following checklist:

Information Responsibility Checklist

- ❑ Students should be ethical and responsible users of information and information networks.
- ❑ Students should respect other students' work on information systems and equipment as it develops.
- ❑ Students should understand plagiarism and the cut and clip mentality – avoiding both.
- ❑ Students understand and practice the concepts of the district's acceptable use policy when using the Internet.
- ❑ Other:

Actions to Take



Collaborative Teaching of Information Literacy: Possible Scenarios

Teachers and library media specialists agree on an information literacy model to be taught throughout the school.

During the first research project of the year, the library media specialist teaches the model (or reviews it) while teacher listens and learns the model.

Teachers and library media specialists assess whether learners are becoming more sophisticated over time and plan accordingly.

Both the teacher and library media specialist might teach a piece of the model just in time for learners to use that skill during their research project.

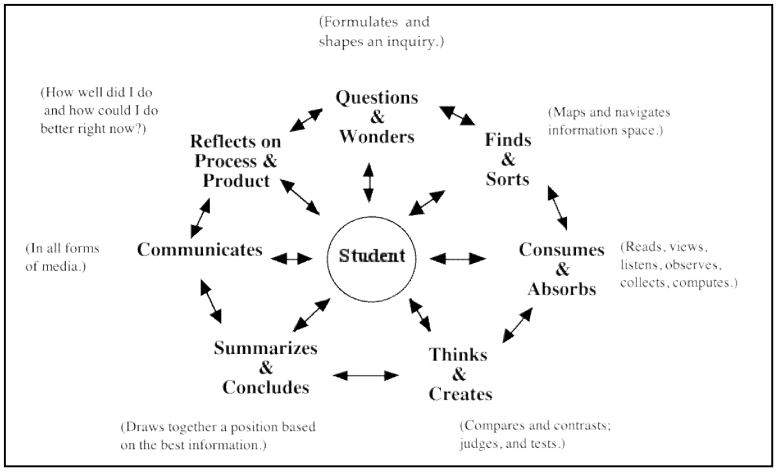
Library media specialist might assess the process part of a project while the teacher assesses the content. Future plans are made depending on how well learners have done with both aspects.

Teacher inserts aspects of the information literacy model in classroom projects without the library media specialist.

Learners may first apply the info. Lit. model in language. arts, then apply it in a social studies project and later a science project.

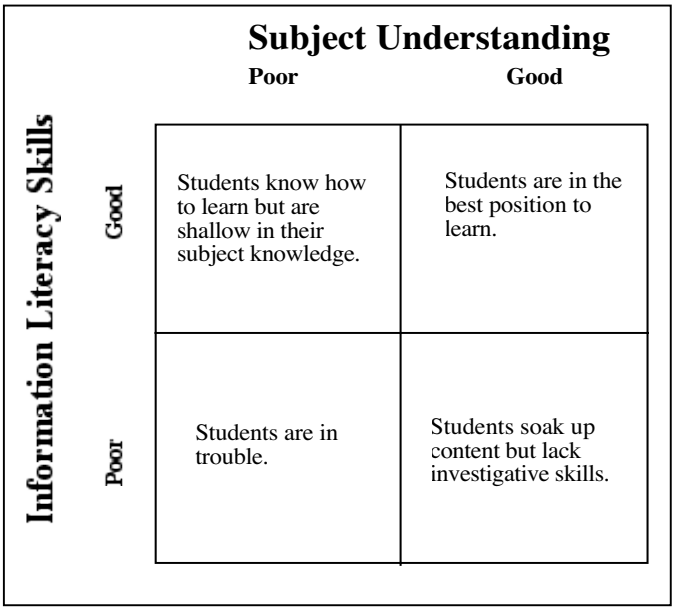
As soon as learners become comfortable with an information literacy model, they are encouraged by both teacher and library media specialist to modify the model to suit their own learning style.

Information Literacy Model



The Battle Rages On!
Shall We Teach Content or Process?

Under the gun to have learners score high, teachers often ask: "What kind of a young learner is best able to do well on achievement tests and meet state academic standards?" "Is it the young person who gorges on content: learning the facts, acting like a data sponge?" "Or is it the person who "knows how to learn" (the information literate; the process learner; the problem solver)?" Note the diagram at the right:



Behaviorists are certain that subject understanding is paramount. On the other hand, constructivists insist that information literacy or knowing how to learn will equip students for the world in which they must compete. The solution of educating a person with both information literacy skills and subject understanding seems to be a sound course, yet many are not sure such a middle road is possible.

Research seems to indicate that when teachers and library media specialists combine to teach both content and process, good things happen.[1] That is, an integrated approach is "worth the perceived risk."

The Position of National Standards and Guidelines.

Many national standards for history, science, and language arts, plus *Information Power* and the *National Educational Technology Standards for Teachers* are decidedly in the constructivist camp. These documents stress the teaching of process as the best way to expect information and information technology to impact learning.

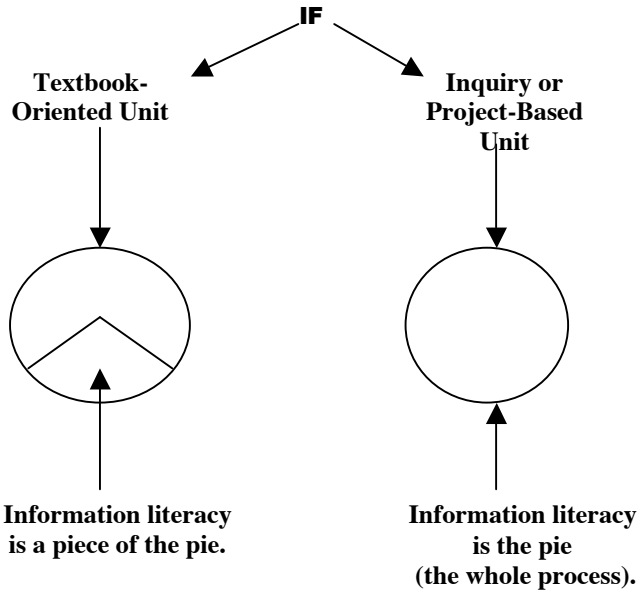
A Clear Message to Teachers.

Library media specialists are saying to teachers very plainly: Work with us to develop avid and capable readers plus allow us to integrate information literacy into your assigned projects and scores will increase.

[1] Lance, Keith and David V. Loertscher. *Powering Achievement*. 2nd ed. LMC Source, 2003.

Methods of Teaching Information Literacy

Depending on the state standard you are trying to achieve and your style of teaching, the library media specialist will want to attack the teaching of information literacy one of two ways as pictured at the right.

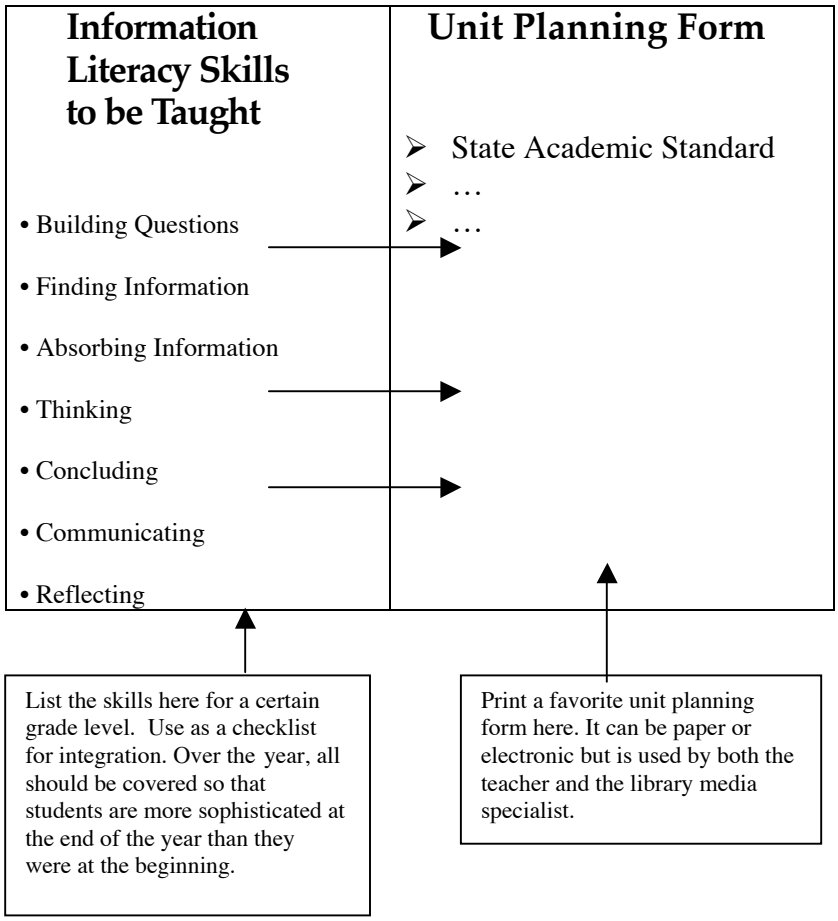


The library media specialist might wish their 10-15 minutes to teach a skill "just in time" for students to use it in their research – their piece of the unit pie.

Or, if the unit activity is based on problem solving or inquiry, then the information literacy model might serve as the scaffold for the entire project.

When the teacher plans with the library media specialist, the illustration on the right shows how the team might begin with a state standard, then figure out what information literacy skills the students will need to accomplish the objectives. These are added to the unit plan.

The library media specialist would say that they are trying to "integrate information literacy into the curriculum."



Scaffolding to Support Information Literacy Skills

As teachers and library media specialists collaborate, both partners will help scaffold students as they approach and do a research project. Topics to teach at each step are many:

Formulate the central search question and subordinate questions	Teach students concepts and questions in own words; brain-storm; freewrite; cluster, map and create other graphic organizers; outline; open-ended questions; K-W-L charts; key words, concepts, and names related to questions; use reference sources to acquire background knowledge.
Identify potential resources	Practice with students the use of relevant resources (i.e., almanacs, encyclopedias, online databases, newspapers and magazines, books, videos); recognition of primary and secondary sources; recognize people as a valuable information resource; become aware of resources beyond the school (i.e., other libraries, community resources, museums); make a list of appropriate sources to solve an information need.
Develop search strategies to organize the search	Using the library catalog; create key word and subject lists; narrow and broaden searches; teach Boolean searching; create interview questions; prioritize and categorize questions; organize search time efficiently; reflect on search strategies and adjust for success.
Search for and gather relevant information	Apply appropriate search strategies for collections being searched; locate and use index and table of contents; revise search questions based on preliminary searches; skim, scan for relevant information; identify gaps in information; record correct bibliographic information.
Evaluate, select and organize information	Teach note-taking; organizing notes; distinguishing between fact and opinion; evaluating sources for authority, currency, and bias; choosing the best sources available; eliminating irrelevant information; verifying facts and sources.
Analyze, interpret, synthesize, and apply information	Teach summarizing; paraphrasing; quoting original sources; drawing conclusions from primary source documents; interpreting charts, graphs and other visual data; identifying inaccuracies and inconsistencies in data; viewing facts from different perspectives; constructing original arguments based on facts from a variety of sources.
Communicate findings	Teach students to identify audience; adjust tone and language to audience; determine appropriate format (i.e., letter, oral presentation, video, web page, PowerPoint presentation; etc); use rhetorical techniques appropriate to the medium; proofread, edit and revise; cite sources; prepare a bibliography.
Reflect on process and product	Teach students to Evaluate one's own and others' work; use of a rubric; maintaining a journal or log to note process; account of strengths and weaknesses as a researcher; description of own search process.

How Would I Recognize Information Literacy If I Saw It in Action?

If I walked by the library media center or briefly walked in for an observation, I might see at a cursory glance whether the library media center was full of students or empty, whether it was quiet or noisy, and whether the students were engaged. However, without a deeper probe, the significance of what was going on might well be elusive. The following observational checklist might help.

If teachers were interviewed, signs that information literacy skills are being taught might include:

- ❑ A lesson plan would have information literacy skills included.
- ❑ The teacher would have had a planning session with the library media specialist in advance of the time in the library media center.
- ❑ The teacher would be aware of an information literacy model being taught to all students in the school.
- ❑ The teacher would understand what information literacy is, and that the library media program is taking the leadership in this activity.

If students were interviewed, their knowledge about information literacy might include:

- ❑ Recognition of the term "information literacy."
- ❑ Knowledge about a helpful process or a procedure of doing research.
- ❑ Knowledge about how the library media center and the technology of the school helps them in their learning projects.
- ❑ Recognition that both the teacher and the library media specialist guide them in the research process.
- ❑ Knowledge that they are getting more and more particular about the quality of information they are finding.
- ❑ Compliments for the information technology systems and their contribution to their education.

Bottom Line:

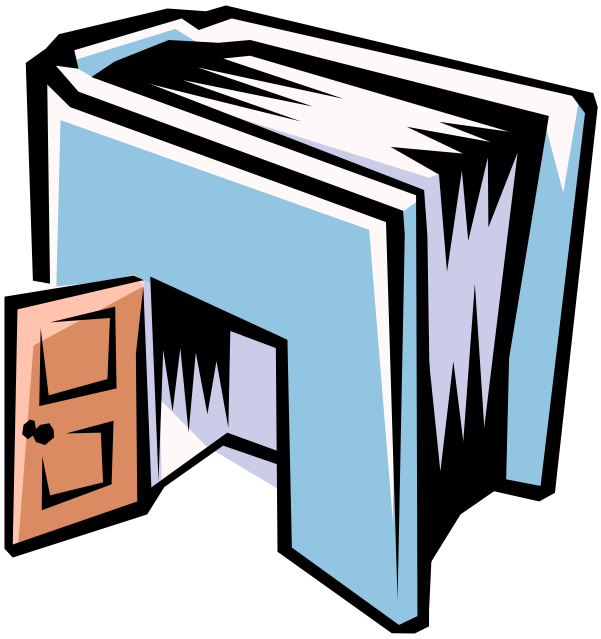
Everyone in the school is aware that information literacy is a natural part of the learning process.

BUILDING AVID AND CAPABLE READERS

The Case for Readers in the Age of Technology

The necessity of building a strong reading program in an information world is more critical today than ever before. Systems such as the Internet do not discriminate by ethnicity or social status, but they do require excellent basic literacy skills; otherwise, another uncrossable gulf opens to divide the haves from the have-nots. Each young person needs to be literate as well as logged on! There is no substitute.

> Literacy *is* a problem to throw money at, but we have to aim carefully by pouring money into library books and then making sure they get read.
>
> **—Stephen Krashen**



Reading Research Linking Amount Read to Academic Achievement

Research completed by Ann E. Cunningham and Keith E. Stanovich, Stephen Krashen, and Jeff McQuillan plus the latest NAEP research from the U.S. federal government link the amount young people read with their scores on academic achievement. The message is clear:

For Everyone: Amount Counts! One hundred years of research supports the notion that free voluntary reading (the kind of reading you want to do, not have to do) — lots of it — is the best predictor of seven essential achievement basics:

Comprehension, Spelling, Grammar, Vocabulary,
Writing Style, Verbal Fluency, General Knowledge

For English Language Learners: Amount Counts! Research also demonstrates that the fastest way to get anyone—child, teenager, or adult—to learn English is to have them read a lot in English! (P.S.: this also works with anyone learning a foreign language.)

Reading vs. Television and Adult Conversation. Consider this: 1) Children's books have 50 percent more rare words in them than adult prime-time television, and 2) Popular magazines have roughly three times as many opportunities for new word learning as prime-time television.

The Sources and Must Reads:

The Power of Reading by Stephen Krashen (Libraries Unlimited, 1993).[1]

The Literacy Crisis by Jeff McQuillan (Heinemann, 1998).

"**What Reading Does for the Mind**" by Ann E. Cunningham and Keith E. Stanovich (*American Educator*, Spring/Summer, 1998, p. 1-8).

The Nation's Reading Report Card: Fourth-Grade Reading 2000 by the National Center for Education Statistics, The Center, 2000 (Known popularly as the "NAEP Report").[2]

NAEP Results 2000

Fourth graders in the United States do better academically when they:

- read more pages in school
- read more pages as homework
- have more books, magazines, newspapers, and encyclopedias in their homes
- report they read for fun every day
- discuss what they read

Do Your Own Preliminary Test: In any group of children or teenagers, ask those who consider themselves avid readers to identify themselves (they read regularly both in and out of school). Compare these students' achievement scores with those who don't consider themselves avid readers.

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[1] Both Krashen and McQuillan books are available from Language Education Associates, PO Box 3141, Culver City, CA 90231; 800-200-8008; web address: http://www.LanguageBooks.com

[2] The NAEP report is available on the web at http://nces.ed.gov/nationsreporrtcard/sitemap.asp or by doing a web search for the "naep report 2000"

If We Believe the Reading Research, What Should the Teacher and the Library Media Specialist Provide to: "Learn to Read"

If a school community really believes the research saying that "amount counts," then the library media center should have an extensive collection of reading materials young people want to read. So many school libraries in the nation have outdated, ragged, and uninteresting reading collections that young people ignore them. When reading collections are large, current, attractive, and easily accessible, good things happen. The best results of library media contributions to reading should be most noticeable when young people have few reading materials in their homes, and when they are in the lowest quartile of reading scores. Is your school library media center program providing the following:

Skill-Based Reading Program

Tons of books to take home.

Tons of books to create rotating class-room collections from the LMC.

Choice:

Books kids and teens want to read.

+

Books adults believe they should read.

Reading materials in all formats including books, magazines, paper-backs, newspapers, e-books, web sites.

Motivation

LMC reading activities that build reading enjoyment – concentrating on "reading is fun."

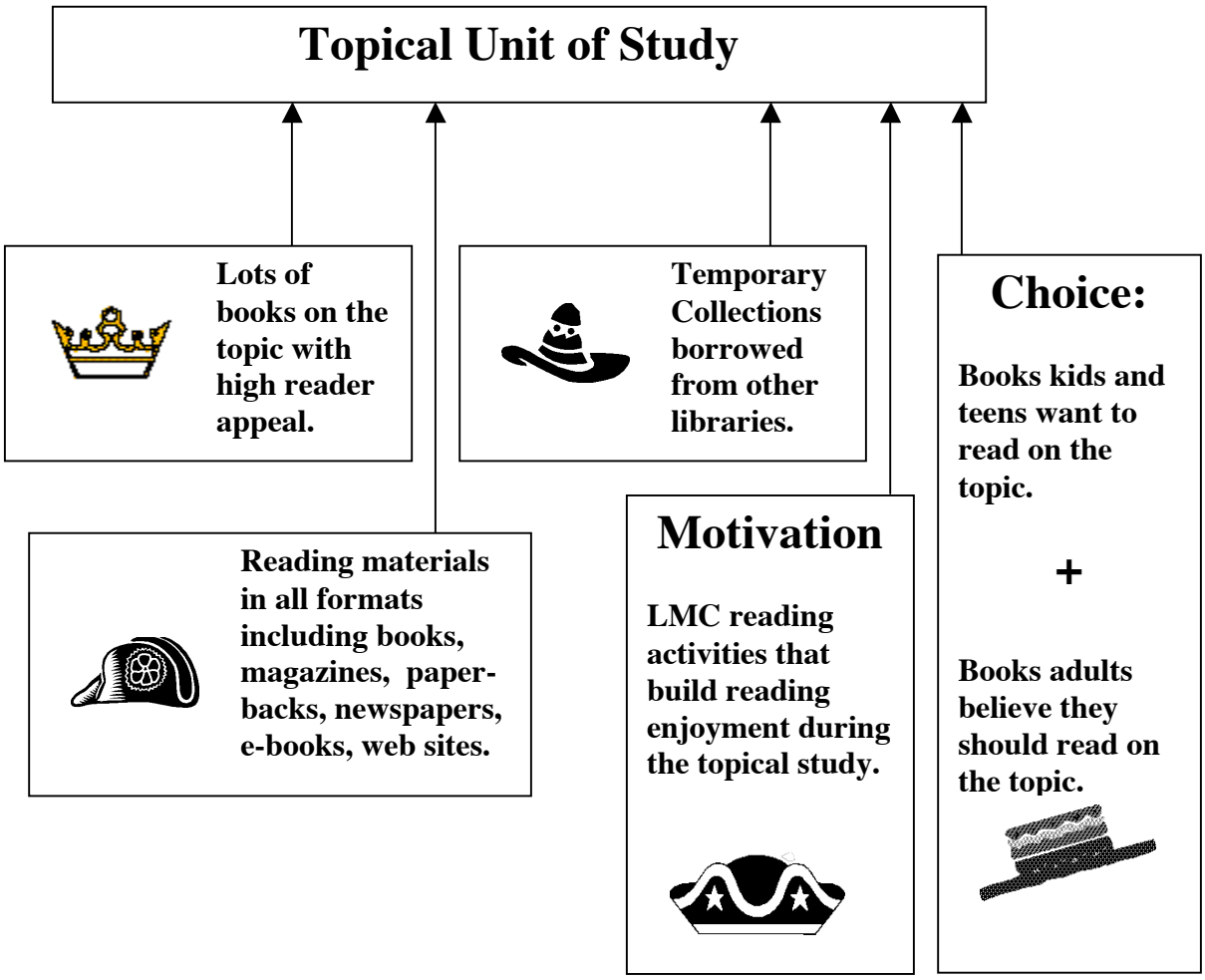
Leadership / Support of Initiatives

- **Sustained Silent Reading**
- **Reading Aloud**
- **Motivational programs**
- **Reading discussions**
- **Reading events**

Bottom line: The LMC contribution to reading should plug the holes in whatever skill-based program exists toward the goal of 100% avid and capable readers. Does your school's LMC reading program measure up? Are you as a teacher taking advantage of the LMC's resources?

If We Believe the Reading Research, What Should Teachers and the Library Media Specialist Provide to: "Read to Learn"

As skill in reading builds, the concentration of the reading program shifts to using reading as a tool to learn as well as reading for enjoyment. The library media program has much to contribute to all subject disciplines as content knowledge is expected to mushroom. This will be particularly true in middle schools and high schools where reading is integrated into the entire curriculum and into all departments.



Bottom line: The LMC contribution to reading in the topical areas should stimulate more expository reading and thus more in-depth knowledge and understanding. Does your school's LMC reading program measure up? Are you as a teacher taking advantage of the LMC's resources when planning your lessons?

Doing a Classroom Print-Rich Environment Audit

Once a year, ask the library media specialist to do a classroom audit with you. Spend 20-30 minutes to analyze the print-rich condition of the classroom using the following checklists. Make a plan to improve the environment.

Genre Analysis

- ❑ Newspapers.
- ❑ Magazines.
- ❑ Novels representing a range of reading levels.
- ❑ Information books that answer and invite interesting questions.
- ❑ Books on tape (fiction and non-fiction).
- ❑ Poetry.
- ❑ Student writing.
- ❑ Picture books (regardless of student grade level).
- ❑ Speeches.
- ❑ Stories that connect to students' lives.
- ❑ Difficulty level. Span all needs?
- ❑ Interactive computer software.
- ❑ Links to online literature, writing, high-interest sites for reading.

Leadership Factors

- ❑ Involvement of parents.
- ❑ Budgeting.
- ❑ Part of school-wide reading initiative?
- ❑ Interface with the public library and other organizations.

Improvements and Solutions

- ❑ Things we can do instantly to improve the classroom collection.
- ❑ Things that will require setting up more formal plans and scheduling those actions.
- ❑ Things that will require administrative attention, long-term planning, budgeting, etc.

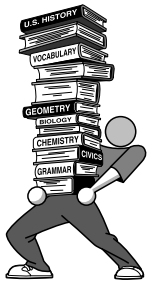
Facilities Analysis

- ❑ Space available – physical for books / computer connections for digital.
- ❑ Use of current space.
- ❑ Ideas for space reallocation.
- ❑ Display space.
- ❑ Shelving adequacy / needs.
- ❑ Use of boxes, bins, other containers.
- ❑ Space for student's books (personal, library media center checkouts, classroom materials).

Operations

- ❑ Condition of permanent collection.
- ❑ Condition of semi-permanent collection from the LMC.
- ❑ Check-out systems for student home use.
- ❑ System for rotating collections from the LMC – Who, when, how, what, how many?
- ❑ Status of temporary collections to match curricular studies.
- ❑ Involvement of students in maintaining classroom collections.
- ❑ Loss, replacement, repair.
- ❑ Sources for purchase / acquisition.
- ❑ Contents of collection (Of interest to students?)
- ❑ In-class promotion.
- ❑ Read-aloud; SSR time.
- ❑ Attractiveness of the collection and what to do about problems.
- ❑ Size of collection. Large enough?
- ❑ Use. Is it contributing to the amount each student reads?
- ❑ Student proposals to make it work better.
- ❑ Weeding as a part of the collection development plan.
- ❑ Book clubs and other classroom initiatives to build personal book ownership.
- ❑ Use and abuse of electronic reading initiatives.

Book Bags and Curiosity Kits: An Idea for the Early Grades

Goal:		Result:
Each child from kindergarten through 2nd grade reads **500+** books per year.		Every reader will read at or above grade level and have a habit of reading.

Try Book Bags. Each classroom acquires enough canvas book bags (either from commercial sources or by making them) for each child in the classroom, plus a few extras. Each book bag is numbered and can be decorated. Once a month, the class goes to the LMC, where the children help select the books for the book bags. Into each book bag goes a book that children can "read for themselves" (a wordless picture book, an alphabet book, books with a few words, highly illustrated books, etc.) and one book that can be read to the child by an older sibling, parent, friend, or caregiver (a good read-aloud picture book, a folktale, a nonfiction animal book, etc.). Back in the classroom, the book bags are hung on hooks or in cubby holes. Each day as the children go home they take a different book bag, rotating throughout the month. The teacher keeps a list on a clipboard to record the book bag number next to the child's name. The homework for a kindergartner through second grader is to read two books a day. If the child forgets to bring the book bag back, the spares can be used. In no case is a child denied access to a book bag, because reading practice is considered essential. The management of this program is considered a success when both the teacher and the library media specialist agree that the system requires very little monitoring. At the end of the month, the class revisits the LMC, where the books are exchanged for new ones. Books in the book bag program are checked out to the room. No individual circulation records are kept for these books.

Schools using this system report extremely low loss rates and damage, counting the cost of either as the cost of doing business. In addition to using the book bags, the class comes to the library once a month to choose books for the classroom collection (a minimum of 100 books at a time). And the students make other visits during the month to select their own personal books to take home in addition to the book bags. The typical kindergartener, first or second grader should have read a minimum of 500 books during the school year and then linked into the public library system for regular reading during vacation periods.

Curiosity Kits. A variant on the book bag program is the creation of curiosity kits where each child creates a book bag filled with 2+ books on a theme that they think other members of the class might be interested in: whales, riddles, drawing books, hobbies, paper airplanes, kite flying, etc.

Theme Bags: During a month when the teacher will be studying a topic, children fill a third or half the bags with books on the topic.

Electronic Reading Programs: Opportunities and Challenges[1]

Electronic reading programs like Accelerated Reader and Reading Counts are relatively new tools becoming more widespread in the quest to create avid and capable readers. These programs vary greatly in cost and effectiveness, with Accelerated Reader (AR) leading the pack in popularity. The computer program awards points to readers based on taking tests. The tests provide feedback to learners and teachers and allow teachers to monitor the quantity and quality of reading learners do.

Before your school adopts Accelerated Reader or another electronic reading program, classroom teachers, administrators, and library media specialists might consider the potential uses and abuses:

Uses. When properly implemented, these programs can:

- Provide structure in building reading skills.
- Provide learners a mechanism for finding books at their own reading ability.
- Give learners instant feedback on their progress.
- Provide a way to track whether learners actually read and comprehend their books, and to encourage them to adjust their reading levels as appropriate.
- Help teachers identify at-risk children and help them get back on track quickly.
- Increase motivation and achievement (although the research is inconclusive on this point).
- Increase circulation from the library substantially.

Challenges - Potential Cautions. Some of the ways such a system can be abused include:

- Linking results to learners' grades. Studies have shown this has a negative effect on intrinsic motivation.
- Linking achievement to extrinsic rewards like food, toys, or play activities, or money. Such rewards may detract from the goal of fostering lifelong reading.
- Public posting of learners' results. While this may motivate high achievers, it can be disastrous for slow learners.
- Restricting curricular or library collection development based on what books are available within that reading program.
- Substituting the computer-based reading program assessments for reading activities that foster critical thinking. Most of these electronic reading programs test plot and factual knowledge rather than understanding.
- Library book budget spent mostly on books for this program.
- Adults who mistake an electronic reading program for a complete reading program.

Suggested Fixes. (since machines should never get in the way of literacy):

- Any book a learner wants to read should be a "program" book. "Extra credit" points can be assigned during a reading conference/discussion by the teacher, library media specialist, or volunteer adult.
- If a young person wants to read something for which there is no test, have that child develop the test for points. Whether the test actually gets on to the computer is a matter of time and manpower.
- While most of what is read might be "at grade level," children should be allowed, even encouraged, to stretch and read anything they are motivated to read.

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[1] Helpful articles about AR include: Topping, Keith. "Formative Assessment of Reading Comprehension by Computer." *Reading Online*, posted November, 1999. Available at: (http://www.readingonline.org/critical/topping/index.html) and Labbo, Linda. "Questions Worth Asking About the Accelerated Reader: A Response to Topping." *Reading Online*, posted November, 1999. Available at: (http://www.readingonline.org/critical/labbo/index.html) Also: Chenoweth, Karin. "Keeping Score," *School Library Journal,* September, 2001, pp. 48-51.

Two Ways to Promote Reading in Your Classroom

Regardless of your experience as a classroom teacher, there are two strategies you can implement right away to improve both performance and attitudes toward reading.

Start SSR (sustained silent reading)

As students progress through school, they spend less and less time reading independently during class. However, many students do not make up for this by increased time reading independently at home. SSR (sustained silent reading) is a response to this reality that holds myriad benefits.

Ten Reasons to Start SSR Today:

1. Increases the amount students read. Amount counts.
2. Builds vocabulary through exposure to words in context.
3. Offers students an opportunity to read materials of their own choice.
4. Leads to more reading outside of school.
5. Provides on-going opportunities for adults to model reading behavior with students.
6. Increases fluency in second language learners.
7. Helps develop reading as a habit.
8. Broadens and deepens students' knowledge base.
9. Places value on reading for pleasure.
10. Fosters a love of reading and a love of learning.

Read Aloud

Many teachers and administrators feel reading aloud is a poor use of instructional time, particularly at the secondary level. However, reading aloud is so effective it should be done every day in classes K-12.

Benefits of Reading Aloud to Your Students

- Builds vocabulary and background knowledge.
- Establishes the reading-writing connection.
- Introduces the nuances of language.
- Helps promote a love of reading.
- Helps introduce types of reading students may not discover independently.
- Provides risk-free opportunities for students to enjoy the richness of written language.

Library Media Specialists Help Teachers Read Aloud By

- Locating high interest literature selections for teacher.
- Reinforcing good modeling by reading aloud to students during booktalks, promotions, and other library visits.
- Locating selections relevant to the classroom teacher's specific curriculum.

"The single most important activity for building the knowledge required for eventual success in reading is reading aloud to students."[1]

[1] Anderson, Richard C. Elfrieda Hiebert, et al. *Becoming a Nation of Readers: The Report of the Commission on Reading.* Washington, DC: National Institute of Education, 1985.

A Checklist for SSR

Janice Pilgreen has identified eight factors critical for successful sustained silent reading programs. Here's a checklist to help plan or revise SSR in your own classroom[1]:

Access

- ❑ You work with the library media teacher to create a classroom library collection with high-interest reading materials.
- ❑ The library media teacher works with you to do special presentations for specific classes so they know where to find their favorite materials in the library.

Appeal

- ❑ Your classroom collections offer a wide range of readability levels in a variety of genres and formats, including magazines, newspapers, picture books, biographies, short stories, drama, poetry, and light reading materials like comic books, romances, and teen magazines.
- ❑ You really do allow students to make their own reading choices and only offer advice when they ask for it.

Conducive Environment

- ❑ Students have enough room at desks or tables to sit without feeling cramped.
- ❑ There is a low-risk atmosphere in which students are comfortable with what they're reading and how fast or well they can read.
- ❑ SSR is quiet, sacred time that is valued by you and students alike.

Encouragement

- ❑ You and the other adults on your campus model your enthusiasm for reading by modeling the reading process.
- ❑ When asked, you help students find books that are right for them, and match not only reading level but subject matter and theme.
- ❑ You receive support from administrators and parents in valuing free reading.

Staff Training

- ❑ You have received adequate training to understand the philosophy behind an SSR program and ways to implement one successfully.

Non-Accountability

- ❑ You refrain from graded activities related to SSR.
- ❑ Students feel as though they are free from being evaluated for their performance in SSR.

Follow-up Activities

- ❑ You provide students with opportunities to share their enthusiasm and reading discoveries with others, and they do so.
- ❑ Students have the voluntary opportunity to collaborate on projects that celebrate reading, including student magazines, author visits, and readers' theater.

Distributed Time to Read

- ❑ SSR is done on a regular and distributed basis, preferably daily for 10-20 minutes.

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[1]This checklist is based on Janice Pilgreen's *The SSR Handbook: How to Organize and Manage a Sustained Silent Reading Program*. Boynton/Cook, 2000.

Linking English/Language Arts Standards and Library Media Center Reading Programs

Many states have set out academic standards for the teaching or the language arts. These standards often do not mention the word "library." One presumes a strong library media program if the standards are to be implemented effectively. Together, library media specialists and teachers develop plans to strengthen the language arts program at all ability and grade levels.

• **Idea: Hold a Language Arts Summit**

• **Who:** Principal, reading specialists, teachers, library media specialists, community representatives, other guests as invited.

• **Engaging Problem:** How can the library and the language arts program complement each other to create a school-wide community of readers?

• **Worksheet:**

List of Major Language Arts Standards and Elements	**How the Library Media Program Can Respond**

List of the Major Library Media Center Reading Program Elements	**How the Language Arts Program/Teachers Can Respond**

Could print p. 85 on the back of this sheet.

• **Task:** Create a collaborative and integrated language arts/library media center program plan.

• **Resources:** What do we already have? What do we need? How will we get what we need?

Sample of Library/Language Arts Program Links

List of Major Language Arts Standards and Elements	How the Library Media Program Can Respond
Phonemic Awareness (1st grade): Students understand the basic features of words. They see letter patterns and know how to translate them into spoken language by using phonics. They apply this knowledge to achieve fluent (smooth and clear) oral and silent reading.	▪ In storytelling, reading aloud, the library media specialist selects stories where word sounds are a natural part of the whole. ▪ Word and letter sounds are a fun part of storytime. ▪ The library media specialist furnishes an ample supply of books where word sounds are a natural part of the literature. ▪ Parent program exists to help on letter sounds.
Comprehension and Analysis of Grade-Level-Appropriate Text (8th grade): Students read and understand grade-level-appropriate material. They describe and connect the essential ideas, arguments, and perspectives of the text by using their knowledge of text structure, organization, and purpose…	▪ The library media specialist arranges for online databases and selected web sites to provide students the variety of information they need that matches their level. ▪ The library media specialist teaches text structure as students encounter a variety of information sources. ▪ The teacher and the library media specialist team as the learners interact with the information.

List of the Major Library Media Center Reading Program Elements	How the Language Arts Program/Teachers Can Respond
▪ The library media specialist notices that in social studies, many learners cannot understand the chapters in the textbook because they are too difficult or the learners do not speak English very well. The library contains a plethora of materials on the topic at hand.	▪ The teacher and the library media specialist work together to choose reading materials on many levels and provide the learners with a wide choice in what they should read on the topic. ▪ Discussion and other activities done by the teacher and library media specialist insure that every learner has a deep understanding of the content knowledge.
▪ The library media specialist has acquired site licenses for word processing and outlining software to help learners both organize their thoughts and make the writing process more efficient.	▪ The teacher and the library media specialist team to teach the new tools including data collection and organization when a major writing project is due.

Note: Sample standards on this page come from Indiana Language Arts Standards.

Assigning Outside Reading

Another way to boost the amount your students read is through extended reading. Such assignments go beyond the normal curriculum, building on students' core knowledge to raise their interest level and exercise their critical thinking skills.

Ideas for outside reading (Ask your library media specialist for more):

Connections to the Real World:
Students search for newspaper or magazine articles connecting themes you're studying with events going on today (don't forget the library databases!). Students can clip articles, provide a brief summary and an explanation of how the articles connect with class themes.

Connections to History:
Students read historical documents, biographies, and historical novels that connect the theme you're studying to ideas that came before it in history. Ask the library media specialist for a list of the best.

Connections across the Curriculum:
Students read articles, biographies, web pages, etc., about how another discipline of study is related to what they're studying in your class. Students add postcard-sized displays of their information to a bulletin board entitled "Connecting (Your subject) to (choose one or more: History, Science, Math, the Arts, Literature, Sports, etc.).

Hall of Fame/Hall of Shame
Students read biographies of famous contributors to the development of the theme you're studying. They make graphic displays for a Hall of Fame or Hall of Shame for that topic.

Another Point of View:
Students read articles, books, or web pages offering an alternative view to the accepted version of the topic you're studying. Students look for reasons the alternative view is not more widely accepted or explain the faulty reasoning for the alternative view.

Poetry, Short Stories, Drama, Novels:
Students read fiction about the topic and write their own fiction in a similar style. The library media specialist will have tons of lists.

Extending the Lesson
Encourage students showing a keen interest in a topic to read about it more extensively. Provide trade books or articles on the topic or refer the student to the library media specialist for more resources.

Have a Special Theme SSR Time
Ask the library media specialist to help assemble a temporary classroom collection on the theme for SSR time during a unit.

Better than the Textbook

Textbooks may not be the best resource for your unit. They may not:

- Explain difficult concepts at the level appropriate to your students
- Explore a topic with sufficient depth or breadth.
- Account for prevalent learning modalities
- Contain breaking developments on a topic
- Represent all perspectives on an issue
- Engage your students fully in the topic

Work with your library media specialist to develop a unit around other resources including:

- Newspaper or magazine articles
- Encyclopedias
- Pre-selected web pages
- Interviews with experts (in community, via e-mail)
- Short stories, poems, or high interest non-fiction related to topic.
- Trade books
- Audio and video: tapes and streaming
- Primary source documents

Here's how it works:

The Need	The Solution
A U.S. History textbook provides one- or two-sentence descriptions of the major New Deal agencies, and the teacher feels learning more about these agencies would help students better understand the effects of New Deal economic policies, both short and long term.	After consulting with the teacher, the library media specialist assembles on a mobile cart trade books about the New Deal; interviews and diaries of everyday people around the country who were affected by a New Deal program; a video about WPA artists; poetry by WPA writers; photographs of major projects like the Bonneville and Hoover Dams; newspaper and magazine articles about New Deal agencies still in operation today. Students read, listen to, and view a range of resources, then group to form generalizations about the overall effects of these agencies and the way they have changed our expectations of government.
An earth science textbook explains the debate over global warming in two pages, but the state standard requires students be able to articulate the controversy in detail.	The library media specialist creates a web page with links to high quality sites about global warming. In library or computer lab visits, students view these pages and use the periodical databases to locate and access current newspaper and magazine articles about the controversy. Using information from these sources, students create poster-sized Venn diagrams illustrating what the sides agree and disagree on.
A math teacher wants students to better understand the relevance of math to our everyday lives.	The library media specialist assembles a collection of poems, short stories, five-minute biographies, and newspaper and magazine articles celebrating math. The teacher reads one aloud at the beginning of every class.

What If Learners Can't Read the Textbook?

This is a common problem in many secondary schools. According to the National Center for Education Statistics, 60% of twelfth graders read below the proficient level, a number that hasn't changed much in the last decade.[1] If the reading level of your textbook is beyond that of your students, and if your curriculum is designed around the use of a single textbook for a resource, both you and your students will surely struggle. Here are five strategies to address the issue in your classroom:

1. Assemble a variety of reading materials.

How it works:
Determine the content goals of your unit, independent of what's in your textbook. Work with your library media specialist to find resources that best match the abilities of your students. Consider including tradebooks, magazines, newspapers, poetry, short stories, novels, drama, picture books, biographies, histories and primary source documents to teach content. Create group and independent assignments in which students explore a variety of resources to meet the content goals.
Advantage:
Individualizes instruction to best meet needs of each student, both in terms of ability level and learning modality.

2. Offer students some choice in selection of materials.

How it works:
Students use a variety of resources to explore a subtopic they've chosen from a list you provide. Students combine their findings (comparing, contrasting, compiling together) with others in class to create deeper understanding of curricular goal.
Advantage:
Offering choice provides students with control over their learning and can increase motivation.

3. Read aloud to students.

How it works:
Read aloud on the topic at hand to build interest, share your joy of reading, or help students negotiate difficult text. Ask your LMS to help you find a variety of reading materials in different genres to read to your class. Read a poem to your chemistry class. Read a short story to your math class. Model oral reading techniques.
Advantages:

- Builds vocabulary and background knowledge.
- Models good reading.
- Promotes a love of reading.
- Helps introduce types of reading students may not discover independently.
- Provides risk-free way of grappling with difficult material.

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[1] *NAEP 1998 Reading Report Card National & State Highlights*, available http://nces.ed.gov/nationsreportcard/pdf/main1998/1999479.pdf

4. Think aloud as you read to students.

How it Works:[1]

- Choose a short segment of text that is especially suited to using the reading strategy you want to teach. Need suggestions? Ask your library media specialist to help.
- Display the text on an overhead and preferably give students their own copies to read.
- Begin reading the text, pausing to think aloud, modeling a specific strategy you normally utilize as a good reader: predicting, forming mental images, summarizing, clarifying, rereading, looking for patterns in the text, comparing new information to what you already know, skimming, scanning, inferring, connecting this text with your personal life, questioning, etc.
- Make notes on the overhead that reflect your thinking.
- Have students make similar notes on their own copies, practicing the use of the strategy you're teaching (Sticky notes allow you to re-use copies).
- Have students label their notes according to the strategy their using (i.e., P for predict, I for inference, S for summary, etc.).
- Provide additional text for students to practice the strategy independently or in groups.
- Reinforce use of the strategies you've already taught each time you introduce a new strategy, so that students see them as tools available to them in their reading toolbox.

Advantages:

- Models specific behaviors good readers exhibit.
- Provides low-risk activity to build skills.
- Helps students become aware of their own metacognitive processes.

5. Give time for independent reading.

How it looks:

All students reading. The Commission on Reading (Becoming a Nation of Readers) recommends two hours a week of independent reading in the classroom.

Advantages:

- Builds fluency.
- Increases vocabulary.
- Builds background knowledge.
- Provides the opportunity to practice newly-learned reading strategies.
- Raises test scores.[2]

Library media specialists have excellent ideas for reading. Ask.

[1] A detailed description of this process is offered by Stephanie Harvey and Anne Goudvis in *Strategies That Work: Teaching Comprehension to Enhance Understanding,* Stenhouse Publishers, 2000.

[2] Data from National Assessment of Educational Progress reports show that the more pages students read, the higher their test scores.

My Reading Log for _____

(topic of research/assignment/personal exploration)

Stimulate reading beyond the textbook for any topical study. It will broaden background and students will score higher. Reward three types of reading:

1. Things I scanned (quick look/read).

- ❑ Books
- ❑ Magazines
- ❑ Web sites
- ❑ Online databases
- ❑ Video/multimedia sources

Time I spent:

What types of reading helped introduce me to the topic?

2. Easy reads that helped me understand more about the topic (could list fiction or nonfiction).

Rate each Item:
* Not worth the time I spent
**Somewhat helpful
***Quite helpful
****Everyone should read this; it's that good

3. Items I really had to read slowly and carefully because they were assigned or important.

Rate each Item:
* Not worth the time I spent
**Somewhat helpful
***Quite helpful
****Everyone should read this; it's that good

Classroom Collections

Classroom collections have become quite popular in the last few years. The notion is that books and information should be at hand in addition to the repository down the hall in the library media center. Sometimes conflict develops over who owns what, inventory, and other matters. Resolution of such conflicts is not difficult when the larger vision of a school-wide print-rich environment is presented and implemented. In the age of technology, the conflict disappears as electronic sources go online.

Advantages of Print Classroom Collections

- Print-rich = more reading
- Close at hand
- Close at hand
- Close at hand

Disadvantages of static (i.e. permanent) classroom collections

- Interesting to students the first few weeks of school and not thereafter.
- Too small to have any significant variety.
- Cannot contain any in-depth information needed for research on various reading levels and in a variety of formats.
- Take up too much room as the collection grows.
- Another management problem for the teacher.

Solution: ROTATING Classroom Collections

- Working with the library media specialist, create rotating classroom collections using the LMC as the warehouse.
- The rotating collection should be as large as the classroom can handle.
- Some items might be semi-permanent; others rotating every few weeks.
- The collection would contain materials for free voluntary reading chosen by students.
- The collection would contain materials to be used in a curricular unit.
- Materials could be circulated from the classroom to the home.
- The collection would contain materials in many kinds of formats including books, paperbacks, magazines, newspapers, multimedia, etc.
- Every room collection would also contain electronic resources, databases, selected Internet sites, and other digital information and multimedia items flowing from the LMC into the classroom and into the home.
- The electronic classroom collection would contain links to the central LMC collection, local, district, and national resources.

Tips for Managing the Classroom Collection

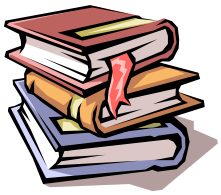
- Work with the library media specialist to develop check-out and return policies. A student who checks out a book from the classroom could return it to the library, and another title could be sent from the library to replace it, helping keep the collection interesting and fresh.
- Assign students to manage check-outs.
- Have students periodically weed the classroom collection, returning books to library and selecting new books for the classroom collection.
- Access, loss and replacement policies must not hinder the existence or use of the collection; some loss would be considered the cost of doing business.
- Mobile teachers can assemble classroom collections using book carts.
- Classroom collections can be augmented through collaboration with public libraries.

When There Are Not Enough Books In Your Classroom

"Classrooms where reading diversity is celebrated have at their foundation immersion in rich language that is used for a variety of purposes and audiences." [1]

Is your classroom filled with a wide variety of print resources?

- ❑ Newspapers
- ❑ Magazines
- ❑ Novels representing a range of reading levels
- ❑ Nonfiction that answers and invites interesting questions
- ❑ Books on tape (fiction and non-fiction)
- ❑ Poetry
- ❑ Student writing
- ❑ Picture books (regardless of student grade level)
- ❑ Speeches
- ❑ Stories that connect to students' lives
- ❑ Art and music
- ❑ Interactive computer software
- ❑ Links to lively and relevant web sites



Ways to build your classroom collection:

Work with your library media specialist to develop a rotating classroom collection from the library collection (rotate a group of titles at least every few weeks).

Work with your local PTA to raise money to purchase reading materials for the classroom and the library media center (You have more when you pool resources with the library media center and then rotate them in and out of your classroom).

Work with department chairs, instructional and curriculum leaders, and principals to allocate money to the purchase of classroom reading materials as a normal curricular expense in the budget.

Offer book club opportunities such as Scholastic or TAB in which students select their own books for purchase at a discount, and you receive free books based on their orders.

Write letters to community groups telling them you need support to buy reading materials for your classroom. Ask for donations for specific items, such as subscriptions to magazines like Sports Illustrated, Time, or Teen. Have your students donate items.

Find used book sales, garage sales, library duplicate sales to find the right books for your collection at ridiculously low prices or for free. Have poverty written on your face.

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[1] Allen, Janet. *Yellow Brick Roads: Shared and Guided Paths to Independent Reading 4-12*. Stenhouse Publishing, 2000.

Checklist of Successful Practices for Reading When Supported by the Library Media Center Program

- ❑ Our reading program is based on the research of Cunningham & Stanovich, Krashen, and McQuillen (see p. 76).
- ❑ My classroom has a print-rich environment (see p. 79).
- ❑ I have a rotating classroom collection (see p. 91).
- ❑ I have "enough" books in my classroom collection (see p. 92).
- ❑ I use book bags or curiosity kits if in K-2 (see p. 80).
- ❑ If I use Accelerated Reader or Reading Counts, I use it properly (see p.81).
- ❑ I link language arts standards into my reading program, regardless of what I teach (see p.84-85).
- ❑ I have a sustained silent reading program in every classroom once a day, K-12 (see p. 83).
- ❑ I have a program to read aloud to every student once a day, K-12. This includes storytelling as well as oral reading (see p.82).
- ❑ I use a motivational program to encourage reading—challenges are preferable to contests.
- ❑ I have a program to involve parents in the total school reading initiative.
- ❑ We have a program to build a school-wide community of readers.
- ❑ I use technology assists to reading as long as those assists actually increase reading time and amount read (educational television, CD-ROM, computer programs, computerized reading motivators). See p. 81.
- ❑ I celebrate reading regularly as milestones are reached.
- ❑ I create the sense that reading is fun! Cool! Something I enjoy!
- ❑ Other:

Signs of Danger to Reading When Not Supported Well by the Teachers or Library Media Center Program

If *any* of the following describe or approximate what is going on in your school, red flags should be raised.

- ❑ Students would not list reading on any list of fun things to do. Reading is *not* cool.
- ❑ Book collections in the library media center are old, worn out, and unattractive.
- ❑ Budgets are so small that the number of new books purchased each year is insignificant.
- ❑ Books available don't match what children or teens would enjoy reading.
- ❑ Students only check out one or two books a week from the library.
- ❑ Classrooms contain few reading materials beyond textbooks.
- ❑ Classroom collections are small, outdated, too limited, or stagnant.
- ❑ Classroom collections and library collections are not connected and are funded separately.
- ❑ Reading aloud, particularly as students get older, is sporadic or non-existent.
- ❑ There is wide concern that high school students are not good readers, but there is no school-wide effort to do anything about it.
- ❑ Teachers of science, social studies, physical education, art, and math don't feel they have any responsibility to teach reading.
- ❑ Science, social studies, or other content areas require little or no reading beyond the few textbook paragraphs on a topic.
- ❑ No program of sustained silent reading exists in the school; or, it has been tried but has been considered a failure.
- ❑ Reading motivation "events" or programs are non-existent or are one-time or annual events of brief duration.
- ❑ There are very few books in students' homes.
- ❑ Students do not have bed lamps for reading at home.
- ❑ Students do not have safe places to keep library books in the home.
- ❑ Parents, care givers, or siblings do not read aloud to younger students on a regular basis.
- ❑ Other:

ENHANCING LEARNING THROUGH TECHNOLOGY

Technology is not going away. It will change, evolve, adapt, ebb, and flow. The only question is how much we can force it to contribute to enhanced learning in education. Taxpayers have spent billions of dollars equipping the schools with the hope that a major return would be forthcoming. Results thus far are mixed, but the true impact can be judged in each teacher's classroom and school.

Technology leaders in most schools worry about networks, capacity, hardware and software upgrades. Library media specialists worry about what's on the networks in terms of quality information. Together, both specialists are poised to partner with teachers in the effort to enhance learning. It's a win-win situation.

Consider the following points as you make plans to use technology in your classroom:

- Technology is a tool, not an end in and of itself.
- Technology is neutral; it can be used to advantage or abused.
- Technology provides a wide variety of new channels for accessing information.
- Technology provides new ways to match student's learning styles.
- Technology provides amazing new channels for communication
- Technology is extremely difficult to justify if it lies unused or becomes outmoded.

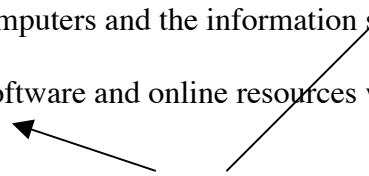
National Educational Technology Goals

1. All teachers and students will have modern computers in their classrooms;

2. Every classroom will be connected to the information superhighway;

3. All teachers in the nation will have the training and the support they need to help all students learn through computers and the information superhighway; and

4. Effective and engaging software and online resources will be an integral part of every school curriculum.



Library Media Center Role

Source: http://www.ed.gov/technology

Everyone a Skilled User of Technology

In a sea of technological devices, upgrades, and new software versions, the list of skills everyone needs has grown exponentially:

- Equipment operation and care
- Software and materials care
- Word processing, database construction, and spreadsheets
- Layout and graphic design for presentations and communication in print, video, and multimedia formats
- Internet and information system searching and use
- New versions and upgrades of software and hardware

Few if any can claim expertise on all machines and information systems. Likewise, keeping a wide array of technologies operational requires a community of supportive and helpful users. Hence the critical compact between adults and students:

You Teach Me
I Teach You
We Teach Each Other
We All Help Keep It Working
In a Safe and Nurturing Environment

Questions for my Classes and Classroom:

1. Are the computers in my room up to date and hooked into the library media center information network?
2. Can I take my whole class, individuals, or small groups to a location where there are reliable computers hooked into the library media center information network?
3. Is there a wireless network and bank of computers that can be sent to my room when all my students need a computer for an assignment?
4. Do I and the technical staff of the school provide "just-in-time" instruction in either software or hardware operation as needed?
5. Have I designated various students to be "coaches" as we proceed into a computer assignment?
6. Do we talk often about the "helping" atmosphere as we all use the high-tech networks?
7. Do we talk about ethical use of information?
8. Do we have rules and help each other avoid potentially dangerous problems in the Internet world?

Does Technology Enhance Learning? What the Research Says

Billons have been spent equipping schools nationwide with technology. Some felt that hooking in and logging on would be a panacea for the nation's educational problems, when in reality, a long-term innovation was being introduced akin to replacing horses with automobiles.

Expected Benefits of Technology for Learners

- Affecting what they know.
  - Enhancing their ability to grasp and retain concepts
  - Enlarging their knowledge base
- Affecting what they can do.
  - Building their efficiency
  - Enhancing their information literacy
  - Enhancing their productivity
  - Building their skills for the world of work.
  - Connecting them to a quality information-rich environment at the elbow
- Affecting their attitude.
  - Engaging them as learners

Expected Benefits of Technology for Teachers

- Affecting what they teach
  - Enhancing the sophistication and amount taught
  - Enabling the teaching of a full range of state standards
- Affecting how they teach
  - Enhancing the ability to reach every learner
  - Assisting in management of classroom operations
  - Diversifying role, location, and time
- Affecting their expectations of learners
  - Expecting learners to learn more in less time
  - Responding to higher student engagement

And the Research Says:

"Technology is a means, not an end; it is a tool for achieving instructional goals, not a goal in itself."[1] "There is a substantial body of research that suggests that technology can have a positive effect on student achievement under certain circumstances and when used for certain purposes."[2] Thus, the best suggestion is for each school to build a repertoire of excellence in enhancing learning through technology.

Must Reads and Resources for Staying Current:

- CARET Funded by the Gates Foundation and under the umbrella of ISTE, this project bridges education technology research to practice by offering research-based answers to critical questions. Most importantly, users can connect to an automatic research reporting service that keeps the reader abreast of new studies dealing with the effectiveness of educational technology. Also check out their "helpful links" page. At: http://caret.iste.org/
- NCRTEC (North Central Educational Regional Laboratory) provides many tools for professional development, planning and evaluation, teaching and learning. At: http://www.ncrtec.org/
- Kelley, Loretta and Cathy Ringstaff. *The Learning Return on Our Educational Technology Investment: A Review of Findings from Research*. San Francisco, CA: WestEd, 2002. At: http://www.wested.org/ cs/wew/view/rs/619 - presents a current overview of selected major studies in the use of computer technology for learning.
- "Using Computers to Improve Student Achievement" Essay and link to research studies done at NCREL. At: http://www.ncrel.org/sdrs/areas/issues/methods/technlgy/te800.htm

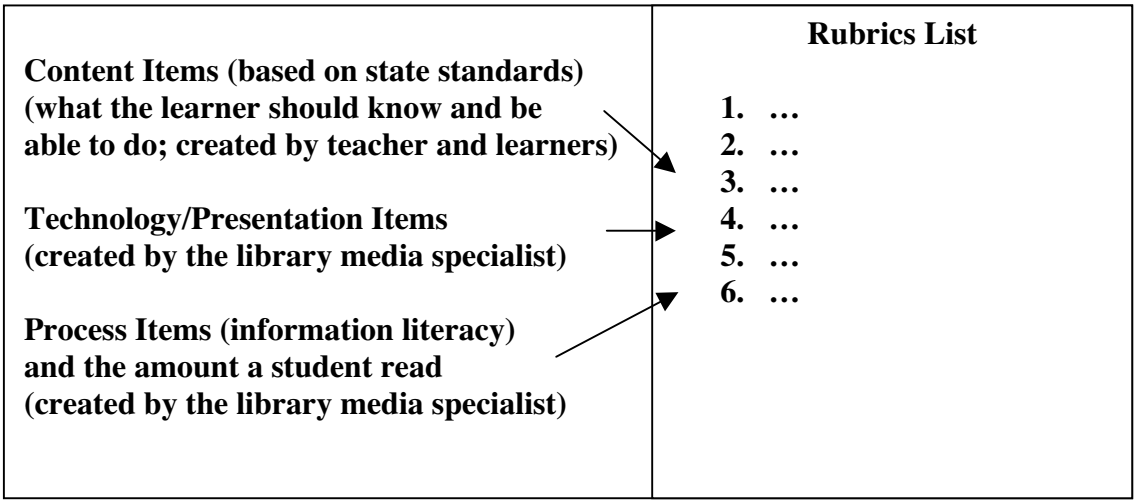
[1] Kelley, Loretta and Cathy Ringstaff. *The Learning Return on Our Educational Technology Investment: A Review of Findings from Research*. San Francisco, CA: WestEd, 2002, p. 1.
[2] *Ibid*., p. 24

Judging Glitz vs. Content in Hi-Tech Products

It is easy to be impressed with the glitz of technology particularly when the student knows more about computers or other high-tech than we do. But glitz is not a substitute for deep learning. Thus the first two commandments of the ten commandments for judging projects for the media fair and for classroom products:[1]

1. **Thou shalt notice the substance of the product or project first.**
2. **Thou shalt notice technological expertise later.**

As learners begin projects, the collaborating team constructs a rubric that sets content before format; rewards learning over presentation; process over product.



Rubric generators are available from NCRtec to assist collaboration teams in including desirable elements. For example, a holistic scoring guide for a compare/contrast project resulted in numerous items of which one is listed below. See at: http://www.ncrtec.org/t1/sgsp.index.html

	5 Exemplary	4 Not Quite Exemplary	3 Developed	2 Not Quite Developed	1 Limited
Content Knowledge	The purpose/main point is clearly defined. The student demonstrates strong critical thinking and well integrated ideas, and maintains clear focus and a compelling and original voice. The student compares and contrasts two things using specific examples to support his position. There is evidence of genuine learning - others find work useful and benefit from this product.		The main point is only implied or partially stated. The student shows some evidence of critical thinking and integration, as well as focus, style, and voice. The student compares and contrasts two things but uses few or somewhat unclear examples to support his position. There is new learning but for the student only – not developed or useful for others.		The main point is unclear. There is little or no evidence of critical thinking or integration and a lack of focus, style, and voice. The student does not compare / contrast two things, and uses inappropriate or no examples to support his position. There is no evidence of new learning - nor developed or useful for student or others.

Resource: Simkins, Michael, et.al. *Increasing Student Learning Through Multimedia Projects*. Alexandria, VA: ASCD, 2002. See also NWREL products at http://www.nwrel.org/assessment/

[1] What are the other eight commandments you follow?

Idea for Teachers, Principals and LMS:
Do an AAR on Technology With Students

What is an AAR?
AARs or After Activities Review is a common technique in the military to determine "how things went" with leaders and soldiers — everyone involved in a training exercise.

Who Would Conduct the AAR?
A mix of the teacher, principal, and/or the library media specialist, plus the students themselves.

When to Conduct an AAR
- After a learning activity where technology was used heavily as a major learning tool.
- After the grades are in. (Students should feel free to speak up.)

Major Questions of an AAR
- How well did a certain technology help you as a learner?
- What information sources seemed to help you the most?
- What problems did you encounter with either a technology or an information source?
- What could we do to make sure that technology and information sources serve us better in our next projects?
- Did the technology really help you learn?
- How could students help? Leaders help?

How to Conduct an AAR
Make up your own AAR review sheet listing questions you want to ask and technologies and information sources your school implements.

Sophistication of the AAR
Tailor the AAR to the maturation level and student experience using technology.

What to Do After an AAR
Meet with the other adults involved to plan any changes in program.

Technologies Used Checklist
- ❑ Library media center catalogs
- ❑ Stand-alone computer stations
- ❑ Internet access
- ❑ E-mail systems
- ❑ Word processing/publishing stations
- ❑ Video production equipment
- ❑ Audio production equipment
- ❑ Multimedia production stations
- ❑ Facilities for use of technology
- ❑ Library facilities access

Types of Information Sources Accessed
- ❑ Books (fiction or nonfiction)
- ❑ Books (Reference)
- ❑ Magazines (printed)
- ❑ Magazines (electronic)
- ❑ Newspapers (printed)
- ❑ Newspapers (electronic)
- ❑ Online databases
- ❑ Computer tutorials
- ❑ Simulation games
- ❑ Internet information sources
- ❑ Museums or field trip sites
- ❑ Visiting experts
- ❑ Other libraries

Possible Problems Encountered
- ❑ Accessibility
- ❑ Inoperative systems
- ❑ Lack of training on a system
- ❑ Lack of assistance during use
- ❑ Breakdown of group process
- ❑ Too little time to work on technology

Bottom Line Questions

- What is the sophistication level of the students in their use of technology?
- Is the use of technology really enhancing the learning experience?

Integrating Information Technology into Your Unit of Instruction

When information technology is integrated into your unit of instruction, what might an observer notice by visiting your classroom, the computer lab, or the library media center?

Student behaviors:

- ❑ Students are interested/engaged in learning projects using technological devices and print resources.
- ❑ Students are using technology purposefully rather than as recreation. Students who are usually disinterested in schooling are engaged.
- ❑ Students are pursuing their own interests as a part of learning activities as opposed to pursuing only topics teachers demand.
- ❑ Because students are handling multiple data sources, they seem naturally headed in the direction of a problem-solving mode of learning.
- ❑ Students seem to be at ease using a variety of presentation technologies.
- ❑ Students are more focused on using the technology as a tool to further their learning than to "dress up" their projects.
- ❑ Other:

Facilities:

- ❑ Students can find whatever technologies they need in a variety of locations throughout the school and are able to get their work accomplished without long waits in line. Configurations of technology allow for simultaneous use of technology by individual students, small groups, and large groups.
- ❑ Students report that, for the most part, the technologies they need are working almost all of the time.
- ❑ Print and computer technologies are integrated into libraries and classrooms. Technology is available to students 24 hours a day, 7 days a week.
- ❑ Other:

Adults:

- ❑ Teachers and library media specialists obviously have buy-in to a technology-rich environment and feel comfortable teaching in that environment.
- ❑ Teachers and library media specialists are in the coaching stance rather than being the principal mechanism for information delivery.
- ❑ Other:

Successful Strategies Using Information Technology to Enhance Learning

Many times, a simple set of flash cards is just as good as a $3,000 machine — and more reliable. Technological sophistication is not automatically the answer. Theoretically, technology should help students learn more and more efficiently, and should be a transparent part of the learning process.

Numerous publications tout effective ways to enhance learning through technology. In reality, they are idea starters. Each teaching team, library media specialist, technology specialist, and student group should, through trial and error, test a variety of techniques and showcase the best. Emphasize technology-based projects where substance is more important than flashy presentations; deep learning over surface learning. Consider the following strategies as a starter list:

Types of problems to create:

- **Collaborative Data Collection and Analysis** - Various student groups in the same school, in the community, state, nation, or internationally, collect data to solve an engaging problem.
- **Real Problems -** Numerous technologies allow students to handle "real" data to solve real problems. The data can be historical, contemporary, or obtained instantly through sensing devices.
- **Simulations** – Simulations, including simulation gaming, provide a way to come close to reality without encountering the dangers, the impossibilities of traveling in time or space, the "what ifs," or the risks.

Using Strategies:

- **The Novelty of Technology** - Enduring a steady diet of the same teaching strategies is boring. The use of a new technology or a fresh approach to an older technology can stimulate interest both in the technology itself and also in the subject matter to be mastered. Implementing new teaching strategies matched to appropriate technologies keeps the learning tasks fresh.
- **Communication Beyond the School** - The Internet, the amplified telephone, and e-mail allow students to communicate around the world, to other schools, experts, governments, agencies, libraries, museums, businesses and a host of other sources. This communication supports the learners as they explore ideas, concepts and important issues.
- **Multiple Data Sources** - The Internet, online databases, books, periodicals, video sources, and connections to other libraries help students experience a wide variety of information on the topic or question they are seeking. There is something for every student at every level.

To Stimulate:[1]

- **Inventive Thinking** – Use technology to stimulate curiosity, creativity and risk-taking and to promote higher-order thinking and sound reasoning.
- **Effective Communication** – Technology can stimulate teaming, collaboration, interactive communication, taking personal responsibility, and social responsibility.
- **High Productivity** – Encourage planning and managing for results as technological tools stimulate efficiency and as students learn to use real-world high-tech tools.

[1] Ideas for stimulation match many suggested in *NCREL's enGauge 21st Century Skills*. Naperville, IL: NCREL, 2002; also, November, Alan. *Empowering Students with Technology*. Arlington Heights, IL: Skylight, 2001.

Notes:

SUPPORTING YOUR LIBRARY MEDIA PROGRAM

Don't take your school library media program for granted! In times of financial hardship, the services, the information databases, the displays of new books, the collaborative planning, the digital school library can vanish and then what?

We can do as third world countries and have a single teacher, a few scanty textbooks, a chalk board and our salary in kind. NOT! (as someone once said) But we could also replace the professional library media specialist with a clerical or volunteer parent. We could do the same with teachers.

The research is clear where clerks man school libraries vs. fully credentialed professionals. The library media specialist makes a difference in achievement, clericals don't.[1] While there may be some dud library media specialists as there are dud teachers, the difference is quite clear when the professional supports teachers in reading, collaborative planning, information literacy, and enhancing learning through technology.

Teachers who are interested in "getting their share" of the library media services find a great deal of support and collegiality as the interests of student learning become paramount.

On occasion, if library media programs are in jeapordy, teachers may have to stand with the library media specialist who is often a "lone voice" advocating for the program. There may be no budget for materials (affecting you instantly) or the LMS may be facing a job loss. In any case, you may have to be a voice of support to administration, boards, and unions. Your own quality of teaching is at stake.

In this section, a few important issues that impact teachers are presented. Some, like intellectual freedom, can be quite sticky, so careful reading is encouraged. And, if you have a lot of spunk as a teacher and want a fabulous challenge, peruse the page on how to become a library media specialist yourself.

[1] While many of the Lance studies present some evidence in this direction, the Alaska study done by Dr. Keith Lance was quite definitive on this point. Ordering information for this study can be accessed through the Alaska State Library website or http://davidvl.org under "Research."

Why a Professional Library Media Specialist?

Teachers in today's classrooms are under intense pressure to perform; to produce a miracle. They face:

- An ever-increasing amount of information in every discipline to teach in the same period of time.
- Intense pressure to have students perform on tests.
- A quandary of teaching to the test vs. trusting their creative instincts.
- A fast-paced change in the technology and information systems available to them as tools.
- A finite amount of money available to accomplish the task at hand.

The question in every school is what mix of support each teacher needs to best accomplish the demands of various pressure groups. Administrators, boards, teacher unions, and community members question what mix of support to provide over and above a teacher in a classroom and a textbook. For example, given enough money in a school to hire one person over an above one-teacher-per-classroom, what type of person would help the teacher the most? A counselor? A nurse? A music teacher? An art teacher? Any one of the above as long as each teacher has a planning period during the day?

Consider the argument in favor of having a professional library media specialist who has a 21st century vision and who has the resources to:

- Partner with teachers to create capable and avid readers.
- Collaborate to build, teach, and assess high quality learning experiences in an information-rich and technology-rich environment.
- Teach every learner to be information literate (organized investigators, critical thinkers, creative thinkers, effective communicators, and responsible information users).

The research on school library media programs (p. 10 of this book) done in more than 15 states show the stimulus that a library media professional gives to a school's academic achievement scores. That is, school communities who care enough to support the teacher with a library media professional find good things happening.

The assumption is that today's high technology and information-rich environments are so filled with potential, yet so complex and ever changing, that teachers would make an effective choice in favor of a professional person. Learners today deserve more than a closet full of books down the hall; a baby-sitting room called the "library" that tends children once a week for a period of time; a "nice" but ineffective service somewhere in the school.

Teachers have powerful voices. How and what will you choose?

The Elementary Library Media Center Schedule: A Quandary

Ask elementary school library media specialists in the United States to identify their biggest problem and they will say that once-a-week scheduled visits prevent them from having a major impact on academic achievement. Library media specialists often have their jobs because they are funded or are under union contract as planning time for elementary teachers. In many schools, the weekly visit schedule ties up the most expensive laboratory space in the school almost the entire week. Individuals, small groups, and other classes needing to use the facility for curricular activities are denied access. The library profession advocates the abandonment of "rigid schedules" in favor of flexible ones. That is, the library media center should be open all day every day. Individuals and small groups can come at any time. And classes can be scheduled for research when teachers and library media specialists want to collaborate.

What are the advantages of the flexible schedule?

The LMC becomes a learning laboratory available to everyone throughout the school day.
Library media specialists have time to collaborate with teachers to create enhanced learning experiences – something that the research shows is the best predictor of increased academic achievement.
The LMC responds to the curriculum, not the curriculum to the LMC.
Library media specialists teach information literacy at the point of need rather than a less effective "course of instruction" – another factor showing greater increases in achievement.
Teachers can schedule the "learning lab" to fit into their unit schedule – sometimes every day for several days and not at all other days. And they can schedule the library media specialist, their partner teacher, for projects when two teachers would be better than one.
Students can get to the LMC when they need it – not just once a week.

If you absolutely must retain the weekly schedule:

- Demand that individuals, small groups, and large groups can use the LMC whether or not a scheduled class is there. Arrange the LMC facility so this can happen.
- Consider having classes scheduled every other week rather than once a week to free up the LMC schedule for collaborative units.
- Consider having the scheduled class do sustained silent reading (SSR) and book checkout during their scheduled visits. The library media specialist would be working with other classes simultaneously on research projects. Have support staff supervise the SSR activity.
- See that more and more information is available on networks to classrooms and homes.

What if flexible scheduling is not working?

- Send a library media specialist and a group of teachers to a place where it is working for a day of analysis and planning.
- Pilot the new plan with a few teachers first, then the school as a whole.

THE BOTTOM LINE

The library media center is a very expensive investment that must pay its way.

Locking it up through rigid schedules negates its impact.

Dealing With Challenged Materials and Technologies

Fears from parents and organizations about what students are being taught or exposed to can bring on individual, group, or whole community battles. Pornography on the Internet is just one of a number of concerns currently being discussed widely.

When students are exposed to a wide variety of information sources, they will automatically encounter good information, opinionated information, unpopular ideas, and seditious ideas. There are risks in the world of free ideas and the argument generally revolves around the question: "At what age should children be allowed to encounter various types of ideas?" Consider a few major principles:

> Free speech and ideas found in books, periodicals, the Internet, and from personal contact have always been dangerous to the status quo.
>
> Controversy generally arises in the areas of politics, religion, sexuality, and foul language.
>
> There is no such thing as a non-controversial book, movie, or Internet site.

Each school administration, faculty, and library media specialist needs to anticipate controversy and be prepared to deal with it. Waiting until objections arise is not a sound plan!

Preparations checklist:

- ❑ We have a selection policy covering all materials and information technologies, including the Internet, adopted and in force. This policy covers both the library media center and the classroom.
- ❑ Our selection policy includes an acceptable use policy covering student behavior on information networks that follow state guidelines.
- ❑ Our selection policy includes a process for dealing with challenges (written complaints, review panels, rulings, follow-up policy consideration).
- ❑ The entire faculty has been educated about the selection policy; the acceptable use policy, and how to apply it in day-to-day situations. They know what to do when someone complains.
- ❑ Every faculty member is equipped with training and parent permission requirements for using sensitive materials in the classroom.
- ❑ When someone complains, we remember we have a selection policy! We apply it when challenges occur.
- ❑ Other:

Can't Find a Professional Library Media Specialist? Become One!

The position of a library media specialist is one of the most challenging and tough jobs you will ever encounter.

- Want a day filled with variety?
- Want to work with everyone in the school?
- Enjoy being creative?
- Want to be on the leadership team?
- Enjoy working with learners of all ages?
- Love technology as well as books?

Consider becoming credentialed or certified according to the laws of your state.

Here's how:

1. Check with your state or ask a library media specialist what the current requirements are in your state for becoming a certified library media specialist.
2. Most states require a teaching credential before being eligible for a library media specialist credential (Why? Because you spend a great deal of time teaching and working with teachers.).
3. Some states will allow you to get an emergency library media specialist credential so that you can work in a library media center while getting your education.
4. Find a quality program that will give you a 21st century education in library and information science. Consider carefully programs that are accredited by the American Library Association. That recognition will give you mobility in the library and information field.
5. You may be able to find programs using distance education with some visits to a campus or almost none. Choose a quality program that fits your learning style.
6. If you will be moving, check the requirements of the state in which you will work so that transition will be as painless as possible.

Idea

A master's degree in library and information science will help you become a better teacher – particularly in the age of information and technology. It's a good choice even if you never work in the field.

P.S. Because the field of library and information science has changed so much in the last decade, you cannot assume that what a long-term professional has done in your school is the role you will assume in an information-rich and technology-rich society.

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