INFORMATION LITERACY

©Literacies for the Digital Age to Teach in the K-12 Classroom
By Leah G. Stambler, Ph.D.
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INFORMATION LITERACY DEFINED
http://pict.sdsu.edu/engauge21st.pdf

- The ability to evaluate information across a range of media;

- Recognize when information is needed;

- Locate, synthesize, and use information effectively; and,

- Accomplish these functions using

  - technology,

  - communication networks, and

  - electronic resources.

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Transforming Teaching Through Technology
Sunday, September 02nd 2012

http://t4.jordan.k12.ut.us/t4/content/view/307/37/

- *What Every Student Needs to Know and Do* by Alan November

- Alan November was one of the first major educators to embrace modern web technologies (commonly referred to as Web 2.0) in elementary, middle and high schools.

- He was one of the initial five Christa McAuliffe Educators. He co-founded the Institute for Education Leadership and Technology at Stanford University. He is the author of Empowering Students with Technology and Web Literacy for Educators .

QUOTES FROM ALAN NOVEMBER

- "Technology has become an indispensable tool in the education of today's students."

- "We need to emphasize the necessity of students learning with others around the world and stress that 3 skills are needed to teach our children.

- "We can't solve problems by using the same kind of thinking we used when we created them."

- "The past 25 years in technology have been the warm-up act. What we are now entering is the MAIN EVENT which is the era in which technology will truly transform every aspect of business, government, education and society of life."

3 MAIN POINTS OF ALAN NOVEMBER'S PERSPECTIVE
http://t4.jordan.k12.ut.us/t4/content/view/307/37/

- 1. We need to teach our students to deal with massive amounts of information. (Information Literacy)

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- 2. We need to teach our student global communication, starting with Kindergarten. (Communication)

- 3. We need to teach our students to be self-directed and understand how to organize more and more of their own learning. (Motivation)

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Information Literacy Standards for Student Learning

- INFORMATION LITERACY
- Standard 1: The student who is information literate accesses information efficiently and effectively.

- Standard 2: The student who is information literate evaluates information critically and competently.

- Standard 3: The student who is information literate uses information accurately and creatively

Information Literacy Standards for Student Learning

- INDEPENDENT LEARNING

- Standard 4: The student who is an independent learner is information literate and pursues information related to personal interests.

- Standard 5: The student who is an independent learner is information literate and appreciates literature and other creative expressions of information.

- Standard 6: The student who is an independent learner is information literate and strives for excellence in information seeking and knowledge generation.

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Information Literacy Standards for Student Learning

- SOCIAL RESPONSIBILITY

- Standard 7: The student who contributes positively to the learning community and to society is information literate and recognizes the importance of information to a democratic society.

- Standard 8: The student who contributes positively to the learning community and to society is information literate and practices ethical behavior in regard to information and information technology.

- Standard 9: The student who contributes positively to the learning community and to society is information literate and participates effectively in groups to pursue and generate information

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QUALITIES OF INFORMATION LITERATE STUDENTS BEFORE THEY ACCESS INFORMATION
http://pict.sdsu.edu/engauge21st.pdf

- They determine what is known and what is needed for problem solving.

- They identify different sources of information, including

  - Text

  - People

  - Video

  - Audio

  - Databases

- They prioritize sources based on credibility and relevance

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QUALITIES OF INFORMATION LITERATE STUDENTS WHILE THEY ACCESS INFORMATION
http://pict.sdsu.edu/engauge21st.pdf

- They identify and retrieve relevant information from sources

- They use technology to enhance searching.

- They revise ineffective information-gathering strategies.

- They understand how information retrieved does or does not address the original problem.

- They evaluate information in terms of

  - Credibility that may impact the information

  - Social, economic, political, legal, and ethical issues that may impact the information

- They use technology to facilitate evaluation.

QUALITIES OF INFORMATION LITERATE STUDENTS AFTER THEY EXTRACT INFORMATION
http://pict.sdsu.edu/engauge21st.pdf

They use retrieved information to accomplish a specific purpose.

- They present information clearly and persuasively using
  - A range of technology tools
  - Media
- They evaluate the processes and products of these activities, including social consequences.

SAMPLE K-16 INFORMATION LITERACY CHECKLIST

http://ncohen.myweb.uga.edu/ILkindergarten.htm

- "Librarians at all grade levels experience the same basic frustration teaching information literacy to students. No matter how creative our teaching method, or how carefully planned our objectives and outcomes, our students go through their school years thinking that research = asking Jeeves or googling. Our information literacy instruction just doesn't 'stick'."

- "The ideal of a K-16 information literacy program embedded in the curriculum is a long-term goal. The first step in advocating and building such a program is for K-16 librarians to see and understand the whole spectrum of information literacy, grade-by-grade, and become familiar with typical teaching methods at each grade level."

SAMPLE K-16 INFORMATION LITERACY CHECKLIST

http://ncohen.myweb.uga.edu/ILkindergarten.htm

SEE FULL SCREEN MODE. CLICK ON LINK BELOW.

K-16 Information Literacy Checklist Website (Draft)

K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | College

- This *DRAFT* website uses the Big 6 format to show information literacy skills grade-by-grade. It borrows heavily from Information Literacy Toolkit: Grades Kindergarten-6. and Information Literacy Toolkit: Grades 7 and Up, by Jenny Ryan and Steph Capra,

  (Chicago : American Library Association, 2001) as well as ACRL's Information Literacy Competency Standards for Higher Education.

SAMPLE: Information literacy skills, organized by stage: KINDERGARTEN

- ## 1. Identify a research topic

- Discusses a given topic in response to an audio and/or visual stimulus

- Draws on prior knowledge to brainstorm ideas and vocabulary for a given question

- Develops listening skills through read-out-louds

- Experiences traditional and contemporary literature through a variety of visual and oral media

SAMPLE: Information literacy skills, organized by stage: KINDERGARTEN

- 2. Find Information
- Understands the layout of the media center (easy fiction and non-fiction)
- Knows how easy fiction books are arranged on the shelf
- Knows borrowing procedures of the media center
- Recognizes author, illustrator and their functions
- Identifies parts of a book (cover, spine, title page)
- Recognizes award-winning books (Caldecott, Georgia Picture Book, etc.)
- Is aware of the Internet as a source for information and communication through email
- Uses keyboard (use of mouse to point and click, Enter/Return key) and practice hand and finger placement on keyboard
- Interacts with an online story or game using a mouse

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SAMPLE: Information literacy skills, organized by stage: KINDERGARTEN

- 3. Analyze, evaluate and select the appropriate information
- Uses pictures, objects, live specimens, etc. to extract information
- Selects appropriate sources by scanning cover and illustrations
- Responds to teacher-led discussion related to pictures, objects, etc.
- Identifies a sequence of ideas
- Interacts with resources by following directions, observing and viewing
- Makes simple decisions and justify actions

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SAMPLE: Information literacy skills, organized by stage: KINDERGARTEN

- 4. Organize and synthesize the information
- Sorts objects according to different characteristics
- Listens to and retell stories in the correct sequence; organize pictorial information in sequence
- Begins to identify patterns and relationships in model examples
- Participates in teacher led discussion
- Begins to think independently
- Verifies results of experiments using modeled examples Interacts with a variety of educational software
- Begins to interact with peers in a fair manner
- Shares information with adults and peers

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SAMPLE: Information literacy skills, organized by stage: KINDERGARTEN

- 5. Create or present a product
- Presents information in simple oral and visual sequence
- Presents a solution to a problem using a range of media, including: picture sequence, collage, mural, model and computer drawing, dramatic presentations
- Enacts role play/puppet presentations
- Creates a response to a task/topic with assistance, using collected information
- Practices hand/finger placement on keyboard

SAMPLE: Information literacy skills, organized by stage: KINDERGARTEN

- 6. Evaluate the research experience
- Respects the opinions of others
- Gives and receives constructive peer feedback
- Shares information with parents

- Adapted from:
Ryan, J & Capra, S. (2001). *Information Literacy Toolkit: Grades Kindergarten-6.* Chicago: American Library Association

Big6 Skills Overview
http://big6.com/pages/about/big6-skills-overview.php

- "Developed by Mike Eisenberg and Bob Berkowitz, the Big6 is the most widely known and widely used approach to teaching information and technology skills in the world.

- Used in thousands of K-12 schools, higher education institutions, and corporate and adult training programs, the Big6 information problem-solving model is applicable whenever people need and use information.

- The Big6 integrates information search and use skills along with technology tools in a systematic process to find, use, apply, and evaluate information for specific needs and tasks."

Big6 Skills Overview
http://big6.com/pages/about/big6-skills-overview.php

- "People go through these Big6 stages—consciously or not—when they seek or apply information to solve a problem or make a decision."

- "Another useful way to view the Big6 is as a set of basic, essential life skills."

- "Students use the Big6 Skills whenever they need information to solve a problem, make a decision, or complete a task."

- "The Big6 Skills are best learned when integrated with classroom curriculum and activities. "

- "Various computer and information technology skills are integral parts of the Big6 Skills."

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The Big6™ Skills

http://big6.com/pages/about/big6-skills-overview.php

- **1. Task Definition**
  - 1.1 Define the information problem
  - 1.2 Identify information needed
- **2. Information Seeking Strategies**
  - 2.1 Determine all possible sources
  - 2.2 Select the best sources
- **3. Location and Access**
  - 3.1 Locate sources (intellectually and physically)
  - 3.2 Find information within sources

The Big6™ Skills

- **4. Use of Information**
  - 4.1 Engage (e.g., read, hear, view, touch)
  - 4.2 Extract relevant information
- **5. Synthesis**
  - 5.1 Organize from multiple sources
  - 5.2 Present the information
- **6. Evaluation**
  - 6.1 Judge the product (effectiveness)
  - 6.2 Judge the process (efficiency)

RESOURCES for EACH BIG6™ STEP
http://nb.wsd.wednet.edu/big6/big6_resources.htm

- ## 1. TASK DEFINITION

- Question Brainstormer - Joyce Valenza provides a framework for developing essential questions.

- Questioning Toolkit - Questioning strategies from Jamie Mackenzie.

- A Taskonomy of WebQuest Tasks - This site does a great job of explaining the different types of tasks that can be explored. It's useful for getting ideas for research projects, even if you're not developing a WebQuest. Also look at the Top, Middling, and New matrices at the WebQuest Portal site for ideas.

- Topic Triangle - Good instructions for narrowing/broadening a topic.

- General-to-specific triangle

- KWHL Chart

RESOURCES for EACH BIG6™ STEP
http://nb.wsd.wednet.edu/big6/big6_resources.htm

- 2. INFORMATION-SEEKING STRATEGIES

- Brainstorming - A technique and example for using brainstorming with students.

- Keywords: Starting Points - A public library site with a good strategy for developing keywords for searching.

- 3M Keyword Method - From the WebQuest site, a method for determining keywords and setting up successful Internet searches.

- Primary and Secondary Sources

- Web page Evaluation - An excellent tool for determining the value of a web page. Includes a downloadable format.

- OSLIS Elementary: How to Search the Web

- OSLIS Secondary: How to Search the Web

- Boolean search tips

- Rockwell Schrock's Boolean Machine

- Kid's Tools for Searching the Internet

- Choose the Best Search for Your Information Needs

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RESOURCES for EACH BIG6™ STEP
http://nb.wsd.wednet.edu/big6/big6_resources.htm

- 3. LOCATION and ACCESS

- UMI Proquest - The ProQuest® online information service provides access to thousands of current periodicals and newspapers, many updated daily and containing full-text articles from 1986.

- eLibrary Elementary

- eLibrary K-12

- 42Explore - This amazing site has preselected Web resources and activities for multiple topics.

- American Memory Collection - from the Library of Congress. If you teach social studies, you need to visit this page. Click on Learning Page for lessons and resources.

- Librarians' Index to the Internet

- KidsClick - Sites selected by librarians. Includes reading levels.

- Yahooligans - Kid friendly sites from Yahoo for kids. Check out the teacher section.

- Thinkfinity - Links to top sites in many disciplines, professionally developed lesson plans, classroom activities, materials to help with daily classroom planning, and more.

RESOURCES for EACH BIG6™ STEP

http://nb.wsd.wednet.edu/big6/big6_resources.htm

- 4. USE OF INFORMATION

- The Trash-n-Treasure Method of Teaching Note-Taking - This is our favorite method for teaching/learning notetaking skills.

- Notemaking - This site has downloadable graphic organizers plus multiple methods for teaching notemaking.

- Graphic Organizers - A great collection of downloadable GO's.

- Laura Chandler's File Cabinet - Graphic Organizers - 3 quality GO's to download.

- Graphic Organizer Index - Examples and suggestions for use of GO's.

- NCREL's Graphic Organizers- Great examples and explanations of GO's from NCREL.

- SCORE's Graphic Organizers

- WriteDesign On-Line - Graphic Organizers

- Graphic Organizers - Download and print several GO's.

- Graphic Organizer graphic organizers concept...

- Inspiration- Software for creating graphic organizers. Download a trial copy. Includes Kidspiration for younger kids.

RESOURCES for EACH BIG6™ STEP

http://nb.wsd.wednet.edu/big6/big6_resources.htm

- 4. USE OF INFORMATION

- NoodleTools - A subscription service for generating a bibliography.

- Landmark Citation Machine

- Classroom Connect Community - Connected Teacher

- Copyright & Multimedia Productions

- Plagiarism - An online resource for checking sources.

- Summarizing, paraphrasing, quoting - Read the explanations from Joyce Valenza's site.

- Copyright for Kids

RESOURCES for EACH BIG6™ STEP

http://nb.wsd.wednet.edu/big6/big6_resources.htm

- 5. SYNTHESIS

- Project Product Ideas

- Products and Assessments - Elementary

- Products and Assessments - Secondary

- Graphic Organizers - GO's can serve as the final product as evidenced by the student work presented at this site.

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RESOURCES for EACH BIG6™ STEP
http://nb.wsd.wednet.edu/big6/big6_resources.htm

- 6. EVALUATION

- Discovery School.com - Kathy Schrock's Guide for Educators - Links to many areas of assessment.

- RubiStar Maker - Make your own rubric by selecting different categories from this excellent online tool.

- Project Checklists - Customize your own checklist for project based learning.

- Assessment Tools for Elementary

- Assessment and Project-Based Learning

BIG6™ RESOURCES on SCHOOL SITES

http://nb.wsd.wednet.edu/big6/big6_resources.htm

- What is Information Literacy? - An excellent guide to the Big6 Process for secondary students.

- Research Skills - A guide for a high school Science class.

- Big Six at Lufkin High School - This is an awesome site with support for everything to do with a research paper for secondary school staff and students.

- The Big6 : Information Literacy - A pathfinder to print and non-print resources about Big6.

- IMC Big6 - Looking for the Big6 in Spanish? You'll find that and much more at this site.

- Research Buddy - This site takes elementary students through every step of the Big6 and provides valuable support materials.

- The Super3 _- The Big6 for very young children.

- Introducing the Super3 - The Super 3 discussed by Mike Eisenberg.

- Big6™ Skills Guide at John Newbery Elementary School Library

INFORMATION LITERACY SOURCES

- **http://pict.sdsu.edu/engauge21st.pdf**   enGauge® 21st Century Skills: Literacy in the Digital Age, "The definition of student achievement must be broadened to include the 21st century skills that will be required for students to thrive in the future" (p. 1).

- http://www.libs.uga.edu/cloc/como_presentation2006.html#

K-16 INFORMATION LITERACY CHECKLIST WEBSITE ADAPTED FROM:

Ryan, J & Capra, S. (2001). *Information Literacy Toolkit: Grades Kindergarten-6.* Chicago: American Library Association.

Ryan, J & Capra, S. (2001). *Information Literacy Toolkit: Grades 7 and Up.* Chicago: American Library Association.

Information Literacy Competency Standards for Higher Education. (2000). Chicago: Association of College and Research Libraries

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INFORMATION LITERACY SOURCES

- http://www.eastside.k12.ca.us/ourpages/gifford/library/About%20Library/ILS.pdf   9 Information Literacy Standards for Student Learning

- http://www.ala.org/acrl/sites/ala.org.acrl/files/content/standards/standards.pdf   *Information Literacy Competency Standards for Higher Education,* The Association of College and Research Libraries A division of the American Library Association, Chicago, Illinois, © American Library Association, 2000, http://www.ala.org/acrl/standards/informationliteracycompetency

INFORMATION LITERACY SOURCES

- http://www.janetsinfo.com/Big6_CCSSIStds.htm   Big6™ Skills Aligned with Common Core Standards

- http://big6.com/pages/about/big6-skills-overview.php Big6 Skills Overview The Big6™

- http://nb.wsd.wednet.edu/big6/big6_resources.htm   Online Resources to Support BIG6™ INFORMATION SKILLS

INFORMATION LITERACY SOURCES

- http://big6.com/media/freestuff/Big6Handouts.pdf The Big6™ Skills The Big6 is a process model of how people of all ages solve an information problem.

- **http://www.readwritethink.org/classroom-resources/lesson-plans/exploring-prologue-canterbury-tales-30508.html** Lesson Plan Exploring The Prologue to *The Canterbury Tales* using Wikis

- **http://www.readwritethink.org/classroom-resources/lesson-plans/analyzing-podcasting-about-images-30503.html** Lesson Plan Analyzing and Podcasting About Images of Oscar Wilde