Appendix A

Rubrics for the Assessment of Information Literacy
RUBRICS
for the Assessment of
Information Literacy

A companion to the Information Literacy Rubrics for School
Library Media Specialists

State Library and Adult Education Office
201 E. Colfax Avenue
Denver, CO  80203

CEMA
Colorado Educational Media Association

1996
An explanation of rubrics, and their application in standards education

The Information Literacy Rubrics are an extension of the Model Information Guidelines (1994; Colorado Department of Education, State Library and Adult Education Office, Colorado Educational Media Association).

A rubric is a descriptive measurement for defining what a learner should know, and can do. This document was created to define the knowledge and ability of every student in how they:

- Construct meaning from information.
- Create a quality product.
- Learn independently.
- Participate as a group member.
- Use information and information technologies responsibly and ethically.

The rubrics are designed in a matrix, or grid of benchmarks which define the information literate student. The far left column contains the Target Indicators, or the individual components of each of the five information literacy guidelines. Each target indicator is followed by four qualities, or key behavior skills, to be measured. These are written in student language, beginning with a minimal level of understanding, labeled In Progress, followed by Essential, Proficient, and Advanced. Page 135 is an overview for all five guidelines; pages 136-42 address specific benchmarks. The final page is a checklist for a student or teacher which may be used in the assessment process.

It should not be a goal to have each student attempt to achieve the Advanced level in each skill area on each project. Rather, the goal should be to assess students on the key points important to the specific content area task, and understand the process for applying that skill in other curricular work. [Example: In a task involving the knowledge seeking process, the student might first be assessed in determining information needs, and acquiring the information. In a later task, they could be assessed in the organization, processing, and evaluation of the information].

The ideal application and use of these assessments is in a collaborative curriculum involving the student, teacher, media specialist, and other stakeholders in the school environment. These rubrics can be used as written to define information goals for the student, or as a framework for student/teacher-written assessments. They are applicable to all grades and content areas, but only through a cooperative effort between the key players will they be truly effective in ensuring student buy-in to understanding the information literacy process.

Knowing how to apply these skills is necessary for successful living in the twenty-first century, and beyond.

Information Literacy Rubrics Writing Team, Dec.-Jan., 1995

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From Information Skills to Information Literacy
### An Overview and Framework for the Information Literacy Rubrics

<table>
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<tr>
<th>Target Indicators</th>
<th>In Progress</th>
<th>Essential</th>
<th>Proficient</th>
<th>Advanced</th>
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<tbody>
<tr>
<td><strong>Student as a Knowledge Seeker</strong></td>
<td>• I need someone to tell me when I need information, what information I need, and help me find it.</td>
<td>• Sometimes I can identify my information needs. I ask for help finding and using information.</td>
<td>• I am able to determine when I have a need for information.</td>
<td>• I know my information needs. I am confident that I can solve problems by selecting and processing information.</td>
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<tr>
<td><strong>Student as a Quality Producer</strong></td>
<td>• Someone else sets the standards and I try to create a product to meet them.</td>
<td>• I may need help understanding what makes a good product, and support to create it.</td>
<td>• I compare my work to models and use them as an example for my product.</td>
<td>• I hold high standards for my work and create quality products.</td>
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<tr>
<td><strong>Student as a Self-Directed Learner</strong></td>
<td>• I have trouble choosing my own resources and I like someone to tell me the answer.</td>
<td>• I might know what I want, but need to ask for help in solving information problems.</td>
<td>• I choose my own resources and like being independent in my information search.</td>
<td>• I like to choose my own information resources. I am comfortable in situations where there are multiple answers as well as those with no answers.</td>
</tr>
<tr>
<td><strong>Student as a Group Contributor</strong></td>
<td>• I need support to work in a group. I have trouble taking responsibility to help the group.</td>
<td>• I usually participate with the group. I offer opinions and ideas, but can not always defend them. I rely on others to make groups decisions.</td>
<td>• I participate effectively as a group member. I help the group process, and evaluate and use information with the group.</td>
<td>• I am comfortable leading, facilitating, negotiating, or participating in a group. I work with others to create a product that fairly represents consensus of the group.</td>
</tr>
<tr>
<td><strong>Student as a Responsible Information User</strong></td>
<td>• If I find information I can use, I copy it directly. I need to be reminded about being polite and about sharing resources and equipment with others.</td>
<td>• I usually remember to give credit when I use someone else's ideas. It is okay for others to have different ideas from mine. I try to be polite and share information resources and equipment with others.</td>
<td>• I do not plagiarize. I understand the concept of intellectual freedom. I am polite and share resources and equipment with others.</td>
<td>• I follow copyright laws and guidelines. I help others understand the concept of intellectual freedom, and can defend my rights if challenged. I acknowledge and respect the rights of others to use information resources and equipment.</td>
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### Students as Knowledge Seekers: Information Guideline #1 (Part 1)

<table>
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<tr>
<td>Determines Information Needs</td>
<td>• I need someone to tell me the topic and what information I need.</td>
<td>• I need someone to define the topic. I can identify, with help, some of the information I need.</td>
<td>• I determine a topic and identify the information I need.</td>
<td>• I determine a manageable topic and identify the kinds of information I need to support the topic.</td>
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</table>
| Develops Information Seeking Strategies and Locates Information | • Someone else selects the information resources I need and shows me how to find the information.  
 • Someone else develops my plan and timeline.  
 • I do not know what to record when doing research, nor what bibliographic information is. | • I select resources but they are not always appropriate.  
 • I have an incomplete plan. I have a timeline, but don't always stick to it.  
 • I return to the same source to find the bibliographic details. | • I use a variety of information strategies and resources.  
 • I have a complete plan and stay on my timeline.  
 • I sometimes record bibliographic information. | • I always select appropriate strategies and resources.  
 • I have a complete plan and can adjust my timeline when needed.  
 • I always record bibliographic information for all my sources. |
| Acquires Information                           | • I don't understand how to use information resources.  
 • Someone helps me extract details from information. | • I do not use a variety of information resources.  
 • I can extract details and concepts from one type of information resource. | • I prefer to limit the number of information resources I use.  
 • I extract details and concepts from different types of resources. | • I am comfortable using various information resources.  
 • I extract details and concepts from all types of resources. |
| Analyzes Information                           | • I have no way to determine what information to keep, and what to discard.  
 • Someone helps me decide what information to use. | • I sometimes apply appropriate criteria to decide which information to use.  
 • I don't always know what criteria to use. | • I examine my information and apply criteria to decide what to use.  
 • I usually know what criteria to use. | • I effectively apply criteria to decide what information to use.  
 • I can match criteria with needs. |
### Students as Knowledge Seekers: Information Guideline #1 (Part 2)

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>Organizes Information</strong></td>
<td>• I try to organize information, but have trouble and have to ask for help.</td>
<td>• I know some ways to organize information. I can use one or two very well.</td>
<td>• I organize information in different ways.</td>
<td>• I choose to organize information in a way that matches my learning style and/or to best meet my information needs.</td>
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<td></td>
<td>• I need to be reminded to credit sources.</td>
<td>• Sometimes I credit sources appropriately.</td>
<td>• I usually credit sources appropriately.</td>
<td>• I always credit sources appropriately.</td>
</tr>
<tr>
<td><strong>Processes Information</strong></td>
<td>• I put information together without processing it.</td>
<td>• I combine information to create meaning. I draw conclusions.</td>
<td>• I integrate information from a variety of sources to create meaning that connects with prior knowledge. I can draw conclusions on my own from my sources.</td>
<td>• I integrate information to create meaning that connects with prior knowledge and draw clear and appropriate conclusions. I provide specific and supportive details.</td>
</tr>
<tr>
<td><strong>Acts on Information</strong></td>
<td>• I am not sure what actions to take based on my information needs.</td>
<td>• I know what to do with the information I find.</td>
<td>• I act based on the information I have collected and processed.</td>
<td>• I act independently of the information I have collected and processed.</td>
</tr>
<tr>
<td></td>
<td>• I ask for help to find everything I need.</td>
<td>• Some of the information I find is appropriate to my needs.</td>
<td>• I do this in a way that is appropriate to my needs.</td>
<td>• I do this in a way that is appropriate to my needs. I can explain my actions so that others understand.</td>
</tr>
<tr>
<td><strong>Evaluates Process and Product</strong></td>
<td>• I don’t know how I did. I need someone to help me figure out how to improve.</td>
<td>• I know how well I did and have a few ideas on how to improve next time.</td>
<td>• I know when I’ve done a good job, and know when there are things I could have done better. I make some revisions.</td>
<td>• I evaluate the product and the process throughout my work, and make revisions when necessary.</td>
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# Students as Quality Producers: Information Guideline #2

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<tr>
<th><strong>Target Indicators</strong></th>
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<tbody>
<tr>
<td><strong>Recognizes Quality and Craftsmanship</strong></td>
<td>- I need help understanding what makes a good product, and how to create it.</td>
<td>- I look at the available products and sometimes see what is needed to create my own.</td>
<td>- I look at several products, evaluate them, and know what I need to do.</td>
<td>- I look at several products provided to me by my instructor, critique them, and see ways to make a better product.</td>
</tr>
<tr>
<td><strong>Plans the Quality Product</strong></td>
<td>- I need help to understand the steps needed to plan my work. I like someone to help me with each step in completing the product.</td>
<td>- I need to be shown the steps to make my plan, and then can work on my own.</td>
<td>- I know the steps necessary for completing my product and make a plan to complete it.</td>
<td>- I create a process and a timeline (with a back-up plan) for all the steps needed to complete my product.</td>
</tr>
<tr>
<td><strong>Creates a Quality Product</strong></td>
<td>- I need help to find which sources to use. I don’t know how to use the facts to solve the problem. I have trouble creating the product.</td>
<td>- I use the minimum sources assigned. I just list the facts. I always use the same sources for other work.</td>
<td>- I create and improve my product by using a variety of resources from the media center or school.</td>
<td>- I compare and contrast facts from a variety of sources available both in and out of my community. I am comfortable using various media for products and audiences. I discover new sources on my own.</td>
</tr>
<tr>
<td><strong>Presents a Quality Product</strong></td>
<td>- My product is incomplete. I don’t revise.</td>
<td>- I complete, but need help with revisions to my product.</td>
<td>- I complete, practice, and revise my product.</td>
<td>- I complete, practice, and revise my product several times. I ask others to give me feedback.</td>
</tr>
<tr>
<td><strong>Evaluates a Quality Product</strong></td>
<td>- I don’t know how to make my product better.</td>
<td>- I need help to understand the best part of my product, and what could have been improved.</td>
<td>- I understand why my product is good, and what could make it better.</td>
<td>- I exceed my expectations when producing and improving a quality product.</td>
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### Students as Self-Directed Learners: Information Guideline #3

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<tr>
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</table>
| **Voluntarily Establishes Clear Information Goals and Manages Progress** | • Setting information goals is difficult for me.  
• I need help from someone to choose what I’m supposed to do.  
• I work best with problems that have only one answer. | • I can set some information goals by myself.  
• I can sometimes find what I’m supposed to do on my own.  
• I see that sometimes there may be more than one solution for my project or problem. | • I almost always set my own information goals.  
• I can usually find a variety of information resources to achieve those goals.  
• When there is more than one solution, I choose the appropriate one for my project or problem. | • I can set my own information goals, and choose the best way to achieve them.  
• I like to explore and evaluate various resources and solutions, I use them to create a new solution to the problem.  
• I’m comfortable in situations where there are multiple answers, or no “best” answer. |
| **Voluntarily Consults Media Sources** | I usually use the easiest source, and only one source. | • I can do what is asked of me, and usually find answers to questions after consulting a few sources. | • I understand how different sources are organized, and look for the ones that best meet my needs. | • I look at many different sources to find those that meet my needs, I consider various points-of-view and the merits of the resources before choosing those that work best for me. |
| **Explores Topics of Interest** | • I have trouble enjoying my reading, and have a hard time staying with a book - or other reading material.  
• I tend to over-use certain information resources to the exclusion of others when I do read.  
• I have trouble exploring new topics. Someone needs to help me get started. | • I enjoy reading certain types of books and other information resources.  
• I usually read only about one subject, or stay with one author’s works.  
• I explore new topics when required. | • I like reading several different types of literature.  
• I enjoy reading in a variety of formats (e.g. books, CD-ROM, and other media).  
• I read to explore and learn about a variety of topics. | • Reading is very important to me, and I enjoy reading and exploring many different topics.  
• I use information resources for information and personal needs, and actively seek answers to questions.  
• I consider alternative perspectives and evaluate differing points-of-view.  
• I read for pleasure, to learn, and to solve problems. |
| **Identifies and Applies Personal Performance** | • I just do what I’m told. Someone tells me if it’s good or not. | • I know when I’ve done a good job. | • I know when I’ve done a good job, and know why I was successful. I am satisfied with the results. | • I know how I learn best, and can choose the method(s) which guarantees my success. I can evaluate what I’ve done. I’m not always satisfied with my results. |
### Students as Group Contributors: Information Guideline #4

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<tr>
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</table>
| **Helps Group to Determine Information Needs** | • I do not participate constructively in a group.  
• I sometimes distract the group.  
• I rely on others to decide what information is needed.  

| **Shares Responsibility for Planning and Producing a Quality Product** | • I am not a part of the group, and/or rarely take responsibility to help plan the group’s information needs.  

| **Collaborates to Determine Relevant Information** | • I have trouble participating in a group, or take over and don’t listen to the ideas of others.  

| **Acknowledges Diverse Ideas and Incorporates them When Appropriate** | • I need support to work in a group, I often do not respect input from others.  

| **Offers Useful Information to the Group, Defends Information and Seeks Consensus to Achieve a Stronger Product** | • I sometimes make the group’s progress difficult.  

| **Clearly Communicates Ideas in Presenting the Group Product** | • I choose not to participate in the presentation, or am unprepared to make a good presentation.  

| **Evaluates Product, Process, and Individual Roles Continuously** | • I don’t work with a group and am not certain how to evaluate the process or product.  

| **I am willing to do what is needed to help determine the information needs of the group.** | • I help define the jobs, and assume some responsibility in assisting with task completion.  

| **I help to define jobs, and am actively responsible in helping to complete the task.** | • I help the group go beyond the basic resources.  

| **I am responsible for helping synthesize the ideas into a finished product.** | • I respect and help the group find and incorporate diverse ideas.  

| **I offer useful information to the group, defend that information when appropriate, and seek consensus to achieve a stronger product.** | • I contribute to the group and demonstrate the ability to use a variety of presentation methods.  

| **I work hard in assuming that contributions from the group are included in the final product.** | • I work with the group to evaluate roles, and apply appropriate evaluation criteria to process and product.  

| **I suggest improvements for the next project.** |
### From Information Skills to Information Literacy

#### Students as Responsible Information Users: Information Guideline 5

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<tbody>
<tr>
<td><strong>Practical Ethical Usage of Information and Information Sources</strong></td>
<td>I don't give credit to others when I use their information.</td>
<td>I can usually put information in my own words. If I use someone else's words, I usually remember to put them in quotes. I can create a bibliography to credit my sources, and don't copy other people's work. I know it's against the law to copy computer disks, tapes, or other materials.</td>
<td>I follow copyright laws and guidelines by giving credit to all quotes and ideas, citing them in notes and bibliography properly. I only make copies of print, software, or tapes when I can locate permission from the author/publisher, or by locating permission on the materials.</td>
<td>I understand and appreciate that copyright protects the creator of the resource, so I always follow and uphold copyright regulations. I do not plagiarize. I cite all my sources by following a format demonstrated to me by a teacher or other source. When I need to copy something, I know how to, and do get permission from the copyright holder.</td>
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<tr>
<td><strong>Respects Principles of Intellectual Freedom</strong></td>
<td>I usually don't pay attention to what others read, listen to, or view, and sometimes react inappropriately to them.</td>
<td>I don't try to keep someone from expressing their own ideas, nor reading, listening to, or viewing what they want.</td>
<td>I understand it is important to have many and differing perspectives on a subject. I know I have the right to express my opinion, and usually offer my opinion in an appropriate manner.</td>
<td>I can explain my First Amendment rights, and if challenged, know the process available to me to defend those rights. I promote the rights of others, and defend them as well.</td>
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<tr>
<td>Target Indicators</td>
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| **Follows Guidelines and Etiquette When Using Electronic Information Resources** | • Someone tells me how to use the information resources, and works with me to get the information I need.  
• I spend so much time using the resources that I deny access for others.  
• I need to be reminded of the guidelines for using electronic resources responsibly. | • I have been trained to use electronic resources, can use them with minimal supervision, and can usually get the information I need without help.  
• I share electronic resources and try to follow appropriate guidelines for their use. | • I get the information I need in a reasonable amount of time so others can also use the materials.  
• I follow guidelines for the use of information resources and use them efficiently. | • I serve as a mentor for others who want to learn how to use electronic resources.  
• I use my skills to promote positive and ethical uses of those resources.  
• I use the materials and equipment fairly and carefully. |
| **Maintains the Physical Integrity of Information Resources and Facilities**     | • I know that information resources/facilities have rules and consequences, and sometimes I follow those rules. | • I usually follow the rules in my school for use of information resources, and accept the consequences when I occasionally break a rule.  
• I never intentionally cause damage to any materials or equipment. | • I respect the rights of others by following the rules, and never intentionally keep materials from being available to them.  
• I tell someone immediately about any damage I cause or discover. | • I appreciate the many resources and facilities that are available to me.  
• I help others follow the rules for the use of equipment and materials.  
• I use materials fairly, carefully, and equitably.  
• I suggest new rules. |
| **Recognizes the Need for Equal Access to Materials and Resources**              | • I use some information resources.  
• Sometimes I only use items from home or my classroom, but might go to the library media center during a scheduled class time.  
• I don’t care if someone else needs to use the information I have.  
• I don’t like to share. | • I go to the library media center when I need information resources.  
• When my library doesn’t have what I need, I know I can ask the media specialist/librarians to help me find it from another source. | • I know it is important for others to have access to information resources, so I usually return items when they are due.  
• When I need other materials that are not in my school, I look for them on suitable networks, and work with my library media specialist to borrow from other sources. | • I use several libraries and online sources when necessary and appropriate to find information I need.  
• I share resources with others when it is helpful.  
• I follow the rules in all buildings, including returning all materials on time. |
Appendix B

Search Process Competencies: A Planning Guide
Research Process Competencies: A Planning Guide

To use this as a planning document, identify the grade levels, courses, or units into which you will integrate information literacy experiences. Use the planning space as an aid to the collaborative curricular planning process. This process is applicable to any curricular area, grades K-12. [Permission is granted to reproduce for instructional purposes.]

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<th>Planning Space</th>
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1: EXPLORE/IDENTIFY THE NEED FOR INFORMATION.

A. Identify the assignment or other purpose for which information is needed.
B. Identify general types of questions or other information needs.
C. Begin a search process log/journal.
   1. Generate ideas using individual and group brainstorming strategies, e.g., discussion, quickwrite.
   2. Use cluster and map techniques to organize brainstorming notations.

2: FORMULATE THE CENTRAL SEARCH QUESTION.

A. Use a variety of questioning strategies (yes/no, open-ended, probing) to create possible questions related to the identified need for information.
Competencies

B. Focus the purpose of the search by formulating a specific question to be answered.
C. Develop a preliminary central question or thesis statement.

3: RELATE QUESTION TO PREVIOUS KNOWLEDGE; IDENTIFY KEY WORDS, CONCEPTS, AND NAMES.

A. Record previous knowledge relating to the central question.
   1. Quickwrite.
   2. Brainstorm ideas and information about the central question by recalling previous experiences.
   3. Note key words, concepts, and names related to the search question.
   4. Demonstrate the ability to use a variety of strategies to organize known information: list, cluster, traditional outline, mind map, radial outline.

B. Review the search process journal to determine missing elements.
C. When previous knowledge is limited, use general sources of information (e.g., a knowledgeable person, encyclopedias) to focus on relationships and key terms for overview of topic.
   1. Skim encyclopedia articles, chapters in books, web sites, outlines, or summaries on the topic.
2. Use video or other technology resources that present general overviews of the topic.
3. Interview a knowledgeable person.
D. Restate phrases/concepts in their own words.

4: IDENTIFY POTENTIAL RESOURCES.

A. Identify potential resources.
   1. List types of resources for seeking desired information, e.g., experts in the field of the search, newspapers, magazines, books, maps, web sites, online databases, audio, and visual resources.
   2. Identify specific resources in each category that may be relevant to the search.
B. Identify availability of resources and group by location.
C. Use broad, general resources if more basic information about the search subject is needed.
   1. Use information from dictionaries, encyclopedias, and other general resources to identify major/significant sources of information regarding the central question.
   2. Recall words, terms, methods, facts, concepts, or specific items, by using broad, general information resources.
5: DEVELOP GENERAL SEARCH STRATEGIES TO ORGANIZE THE SEARCH

A. Use previously compiled terms and add subject headings and database descriptors that relate to the central question or thesis.
B. Summarize in simple sentence form the main ideas regarding the central question.
C. Ask further questions to clarify meaning.
D. Construct subquestions about the central question.
E. Discriminate between more important and less important questions and exclude the least important questions.
F. Create a plan for the search based on the resulting questions.
G. Organize key words, phrases, and subject headings into Boolean and other relevant search strategies.
H. Reanalyze search strategies as success or failure is experienced.
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**6: LOCATE AND EXPLORE PREVIOUSLY IDENTIFIED RESOURCES.**

**A. Locate available resources from those previously identified.**

1. Recognize and use library media center resources, including the consulting role of the library media specialist.
2. Reconsider general resource materials previously identified, such as periodicals, newspapers, special encyclopedias, electronic sources mentioned earlier.
3. Consider resources outside the school, e.g., other libraries, museums, community resources, experts, and online resources.

**B. Use information access skills.**

1. Recognize that most information sources are indexed and that indexes may be in a variety of formats such as card, print, microform, or online.
2. Recognize that information is arranged and indexed in one or a combination of ways such as by subject, location, alphabetically, chronologically, on a continuum.
3. Locate the index for each information source and interpret all information in index entries.
4. Use subject headings and cross references to find additional resources.
5. Access relevant records in online databases.
   a. Determine the possible databases to be searched.
   b. Design the search strategy, narrowing or expanding the search parameters as needed.
C. Revise or redefine the central question by narrowing or broadening its focus as necessary.

7: SELECT THE MOST USEFUL RESOURCES FOR FURTHER EXPLORATION AND FORMULATE SPECIFIC STRATEGIES FOR USING THEM.

A. Select the most useful resources from those available.
   1. Skim the article, media abstract, or text printout to find a word, name, date, phrase, idea, or general overview of the resource.
   2. Scan/search materials in electronic or other nonprint formats.
B. Conduct primary research as needed.
   1. Plan and complete an interview, experiment, or observation.
   2. Plan and conduct a survey/questionnaire.
3. Write a letter of inquiry.
   C. Revise or redefine the central question or statement by narrowing or broadening as necessary.

8: SEARCH FOR RELEVANT INFORMATION.

A. Locate the sections of each resource that are useful in answering the search questions.
   1. Use indexes, tables of contents, headings within chapters, and topic sentences of paragraphs.
   2. Use skimming skills to extract information from selected resources.
   3. Find and make effective use of the relevant sections in nonprint media such as videotapes, films, and audiotapes.

B. Continue to compile and organize information.
   1. Identify gaps in information collected.
   2. Determine if additional sources are needed.

C. Compare information with search questions.

D. Compile bibliographic information for each resource.

E. Review, evaluate, and update the search process log/journal.
9: EVALUATE, SELECT, AND ORGANIZE INFORMATION.

A. Screen the potential bits of information.
   1. Choose those that contribute to the search question.
   2. Record the chosen information in an organized way.

B. Evaluate for currency of information.
   1. Identify copyright date.
   2. Identify the actual date, era, or time the ideas were created.
   3. Understand the significance of dated versus current information, or whether dating is significant at all.

C. Establish authority.
   1. Identify the contributor/producer of the sources being used.
   2. Evaluate the contributor's/producer's work for motive, point of view, bias, scholarship, intended audience, etc.

D. Distinguish among fact, opinion, and propaganda.
E. Select information that is most useful in addressing the central question. Eliminate irrelevant information.
<table>
<thead>
<tr>
<th>Competencies</th>
<th>Planning Space</th>
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<tbody>
<tr>
<td>F. Take notes, using one or more of a variety of notetaking strategies such as highlighting, photocopies, electronic note pad, note cards.</td>
<td></td>
</tr>
<tr>
<td>G. Organize notes and ideas and develop an outline or graphic organizer.</td>
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</tbody>
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10: ANALYZE INFORMATION RETRIEVED: INTERPRET, INFERENCE, AND INTEGRATE.

A. Read, view, or listen to sources, identifying main ideas, opinions, and supporting facts. Inconsistencies are noticed and questioned.
B. Interpret graphic sources of information: maps, charts, pictures, diagrams, graphs, tables, etc. Inaccuracies are discovered and rejected.
C. Derive valid inferences from information sources. Substitute new ideas when information is inaccurate.
D. Summarize and paraphrase important facts and details that support the central question. Compile notes/information according to the outline previously developed. Create new conclusions from facts using different perspectives.
E. Review compiled information to bring personal meaning and understanding to the original problem, topic, or question.
11: DETERMINE HOW TO USE/PRESENT/COMMUNICATE INFORMATION: ORGANIZE INFORMATION FOR INTENDED USE; USE INFORMATION.

A. Determine the most effective method of presentation.
   1. Identify and use appropriate media technologies.
   2. Consider presenting thoughts, feelings, and creative ideas through student-produced media such as books, posters, transparencies, slide shows, puppets, audio and video tapes, web pages, hypermedia, newspapers, or electronic resources.

B. Plan for projects such as dramatizations, debates, writing, multimedia slide shows, video-tape presentations, demonstrations, or exhibits.
   1. Decide on a purpose such as to inform, persuade, entertain, etc.
   2. Select an appropriate organizational style.
   3. Determine the main point to be made or arguments to be developed and adapt a working outline.
   4. Use the composition process including prewriting, rough draft, writing/designing/scripting, etc. (Most forms of presentation require some written planning.)
5. Prepare a bibliography or list of all references used.
C. Make a clear, well-supported presentation that answers the central question or solves the problem by applying search information.
D. Draw conclusions based on gathered information.

12: EVALUATE RESULTS; EVALUATE PROCESS.

A. Evaluate the project and the search process.
   1. Reflect on the process as a whole. What came easy? What was difficult? Why were there barriers? Which could be solved with a different approach?
   2. Reflect on the information sources that were used. Were they easy to find? What local libraries and agencies responded poorly or well? Why? What changes in library collections, procedures, and assistance would help in the information gathering process.
   3. Review the search process log/journal. Does it show progress in conducting information searches? What kinds of improvements in the process would lead to better results?
   4. What is the quality of the product created? Does it show careful analysis, thoughtful content, and good technical execution? Is it creative?
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