Standard One  
The information literate student determines the extent of the information needed and constructs a framework for obtaining the information.

Performance Indicators  
The information literate student:

1. Defines and articulates the need for information.  
Measurable outcomes:  
The student:
   a. Identifies and/or paraphrases a research topic, or other information need.
   b. Develops a thesis statement and formulates questions based on the information need.
   c. Explores general information sources to increase familiarity with the topic.
   d. Defines or modifies the information need to achieve a manageable focus.
   e. Identifies key concepts and terms that describe the information need.

2. Identifies a variety of types and formats of potential sources for information.  
Measurable Outcomes:  
The student:
   a. Knows how information is formally and informally produced, organized, and disseminated.
   b. Recognizes that knowledge can be organized into disciplines that influence the way information is accessed.
   c. Identifies the value and differences of potential resources in a variety of formats (e.g., multimedia, database, website, data set, audio/visual, book).
   d. Identifies the purpose and audience of potential resources (e.g., popular vs. scholarly, current vs. historical).
   e. Differentiates between primary and secondary sources, and recognizes that their use and importance vary with each discipline.
   f. Realizes that information may need to be constructed with raw data from primary sources.

3. Considers the costs and benefits of acquiring the needed information.  
Measurable Outcomes:  
The student:
   a. Determines the availability of needed information and makes decisions on broadening the information seeking process beyond local resources.
(e.g., interlibrary loan; using resources at other locations; obtaining images, videos, text, or sound).

b. Considers the feasibility of acquiring a new language or skill (e.g., foreign or discipline-based) in order to gather needed information and to understand its context.

c. Formulates a realistic overall plan and timeline to acquire the needed information.

**Standard Two**
The information literate student accesses needed information effectively and efficiently.

**Performance Indicators**
The information literate student:

1. Selects the most appropriate investigative methods or information retrieval systems for accessing the needed information.
   - **Measurable Outcomes:**
   - The student:
     
     a. Identifies appropriate investigative methods.
     b. Investigates the scope, content, and organization of information retrieval systems.
     c. Selects efficient and effective approaches for accessing the information needed.

2. Constructs and implements effectively-designed search strategies.
   - **Measurable Outcomes:**
   - The student:
     
     a. Identifies keywords, synonyms and related terms for the information needed.
     b. Selects controlled vocabulary specific to the discipline or information retrieval systems.
     c. Constructs a search strategy using appropriate commands for the information retrieval system selected (e.g., Boolean operators, truncation, and proximity for search engines; internal organizers such as indexes for books).
     d. Implements the search strategy in various information retrieval systems using different user interfaces and search engines, with different command languages, protocols, and search parameters.

3. Retrieves information in a manner that is appropriate or relevant to the format.
   - **Measurable Outcomes:**
   - The student:
     
     a. Uses various and relevant search systems to retrieve information.
     b. Uses various classification schemes and other systems (e.g., call number systems or indexes) to locate information resources.
c. Uses specialized online or in person services to retrieve information needed (e.g., interlibrary loan/document delivery, help centers, institutional research offices, community resources, experts, practitioners, professional associations, archives, etc.).
d. Uses surveys, letters, interviews, and other forms of inquiry to retrieve primary information when appropriate.

4. Refines the search strategy if necessary.
   Measurable Outcomes:
   The student:
   a. Assesses the quantity, quality, and relevance of the search results to determine whether alternative information retrieval systems or investigative methods should be utilized.
b. Identifies gaps in the information retrieved and determines if the search strategy should be revised.
c. Determines probable accuracy by questioning the source of the data and by noting the limitations of the information gathering tools or strategies.
d. Repeats the search using the revised strategy as necessary.

5. Manipulates, records, and transfers the information and its sources.
   Measurable Outcomes:
   The student:
   a. Selects among various technologies the most appropriate one for the task of extracting the needed information (e.g., copy/paste software functions, photocopier, scanner, audio/visual equipment, exploratory instruments or note taking).
b. Differentiates between the types of sources cited and understands the elements and correct syntax of a citation for a wide range of resources.
c. Records all pertinent citation information for future reference through downloading, printing, emailing, or manual notation.

6. Consults experts for assistance and/or guidance when needed.
   Measurable Outcomes:
   The student:
   a. Consults with instructor for appropriateness of topic.
b. Consults librarian or library staff if unable to identify appropriate materials.
c. Identifies subject experts to consult as necessary.
Standard Three
The information literate student evaluates information and its sources critically, and as a result, considers whether or not to modify the initial query and/or seek additional sources.

Performance Indicators
The information literate student:

1. Selects information by articulating and applying criteria (such as accuracy, relevance, comprehensiveness, reliability, and knowledge of discipline publication processes) for evaluating both the information and its sources.
   Measurable Outcomes:
   The student:
   a. Recognizes which category an information source falls into with respect to the publication process for the discipline.
   b. Distinguishes among facts, points of view, and opinion.
   c. Examines and compares information from various sources in order to evaluate reliability, validity, accuracy, authority, timeliness, and point of view or bias.
   d. Analyzes the structure and logic of supporting arguments or methods.
   e. Recognizes prejudice, deception, or manipulation.
   f. Recognizes the cultural, physical, historical, or other context within which the information was created and understands the impact of context on interpreting the information.
   g. Investigates differing viewpoints encountered in the literature.
   h. Determines whether to incorporate or reject viewpoints encountered.

2. Compares new knowledge with prior knowledge to determine the value added, contradictions, or other unique characteristics of the information.
   Measurable Outcomes:
   The student:
   a. Determines whether information satisfies the research or other information need.
   b. Determines whether the information contradicts or verifies information used from other sources.
   c. Draws conclusions based upon information gathered.
   d. Integrates new information with previous information or knowledge.
   e. Selects information that provides evidence for the topic.

3. Determines whether the initial query should be revised.
   Measurable Outcomes:
   The student:
   a. Determines if original information need has been satisfied or if additional information is needed.
   b. Reviews search strategy and incorporates additional concepts as necessary.
   c. Reviews information retrieval sources used and expands to include others as needed.
Standard Four
The information literate student understands and respects the ethical, social, and legal issues surrounding the use of information and its technologies.

Performance Indicators
The information literate student:

1. Respects the principles of equitable access to information and of academic freedom.
   Measurable Outcomes:
   The student:
   a. Treats library materials with respect.
   b. Allows others to have the same access to materials that s/he enjoys.
   c. Recognizes that library materials represent a variety of viewpoints on controversial topics.

2. Respects intellectual property rights and applies principles of academic honesty in use of information.
   Measurable Outcomes:
   The student:
   a. Legally obtains, stores, and disseminates text, data, images, or sounds.
   b. Complies with institutional policies on academic honesty.
   c. Acknowledges works of others through accurate citations and references.
   d. Posts permission granted notices, as needed, for copyrighted material.
   e. Integrates the new and prior information, including quotations and paraphrasing, in a manner that supports the purposes of the product or performance and recognizes intellectual property rights.
   f. Manipulates digital text, images, and data, as needed, transferring them from their original location and formats to a new context in a way that recognizes intellectual property rights.

3. Follows regulations, institutional policies, and etiquette related to the access and use of information resources.
   Measurable Outcomes:
   The student:
   a. Participates in electronic discussions following accepted practices (e.g. “Netiquette”).
   b. Legally uses approved passwords and other forms of ID for access to information resources.
   c. Complies with institutional policies on access to information resources.
   d. Preserves the integrity of information resources, equipment, systems and facilities.
Standard Five
The information literate student understands that information literacy is an ongoing process and one component of lifelong learning.

Performance Indicators
The information literate student:

1. Understands that information searching requires time, diligence, and practice, and that skills are learned over time.
   Measurable outcomes:
   The student:
   a. Allows an adequate amount of time for research and retrieval of materials, and recognizes that not all materials are available locally.
   b. Recognizes that advanced searching techniques may be required for complex topics and as research is conducted more in-depth in a particular field.
   c. Recognizes the need to be flexible in the research process.
   d. Recognizes that each information need may require a different search strategy.

2. Increases self-confidence with practice and experience in information seeking.
   Measurable outcomes:
   The student:
   a. Maintains composure and continues searching when first attempts to find information do not yield adequate results. (Shows less frustration over time).
   b. Considers alternate strategies for finding information (e.g. changes databases or tools, changes search terms, consults experts).
   c. Knows own searching limitations and asks for assistance when needed.

3. Appreciates that information literacy requires an ongoing involvement with learning and information technologies.
   Measurable outcomes:
   The student:
   a. Recognizes that learning about information gathering is an ongoing process as information needs change, as scholarly publishing changes, and as access tools evolve.
   b. Exhibits willingness to try new technologies and/or tools.