

# Grades 4, 5

Adopted 2010

**Define and Refine Problem or Question: Students will be able to follow an inquiry process to define a problem, formulate questions, and refine either or both to meet a personal and/or assigned information need.**

**A. Follow an Inquiry Process**

1. Follow an inquiry process and connect the process to real life.
    - a. With guidance, identify the inquiry process used in the school.
    - b. With guidance, explain how the process can be used in real life.
    - c. With guidance, follow the inquiry process used in the school for an assigned information need.
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**B. Define a Problem, Formulate Questions, and Refine a Problem and/or Question**

1. Identify an assigned or personal information need.
    - a. Identify an assigned information need.
    - b. Identify a personal information need.
  2. Determine the scope of the information need.
    - a. With guidance, collaboratively create, refine, and use criteria to determine the scope of an information need.
  3. Formulate and refine questions to meet an information need.
    - a. Use prior knowledge to individually formulate and refine questions to meet an information need.
    - b. Collaboratively, identify which formulated questions are researchable.
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**Locate and Evaluate Resources and Sources: Students will be able to follow an inquiry process to identify, locate, evaluate, and select resources and sources in a wide variety of formats to meet the information need in an ethical manner.**

**A. Locate and Evaluate Resources**

1. Identify resources to meet the information need.
  - a. With guidance, explore and identify human, print, online, and multimedia resources.
  - b. With guidance, decide which resources best match an identified information need.
  - c. With guidance, refine or revise researchable questions based on access to and availability of resources.
2. Use safe practices when online.
  - a. Identify, review, and follow the district's Acceptable Use Policy and school-based computer use rules.
  - b. With guidance, identify safe and unsafe online practices

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**B. Locate and Evaluate Sources**

1. Locate and select sources to meet the information need.
    - a. Identify the sections of the media center and the attributes of the sources located within each section.
    - b. With guidance, use the media center's catalog to locate sources to meet the information need.
    - c. Apply knowledge of search strategies to locate relevant sources.
    - d. Select print, online, and multimedia sources.
  2. Evaluate sources to meet the information need.
    - a. With guidance, evaluate sources based on currency, authority, bias, and relevance to select sources that best meet the information need.
    - b. With guidance, use text features effectively to select sources that meet the information need.
    - c. With guidance, defend selected sources.
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**Find, Generate, Record, and Organize Data/Information:**  
**Students will be able to follow an inquiry process to find, generate, record, and organize information relevant to the information need in an ethical manner.**

**A. Find Data/Information within a Variety of Sources**

1. Use specific sources to find information.
    - a. Use keywords and text features that help find information within a specific source.
    - b. Explain which strategies (keywords, text features) are used to find information within a specific source.
    - c. With guidance, use technology tools to find data/information within a specific source.
  2. Evaluate the relevance of information within a specific source to meet the information need.
    - a. Differentiate between fact and opinion within a specific source.
    - b. Confirm that the information found within a specific source matches the information need.
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**B. Generate New Data/Information in an Ethical Manner.**

1. Generate new data/information from interviews and/or surveys.
  - a. With guidance, generate appropriate questions to meet the information need.
  - b. With guidance, generate information in an appropriate format (e.g., video or audio recording, notes, graphic organizer, table).
  - c. With guidance, exhibit ethical behavior in generating information.

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### **C. Record and Organize Data/Information**

1. Record data/information in a variety of formats.
    - a. Explain why a specific format is being used to record data/information to meet the information need.
    - b. Identify significant characteristics of various organizational formats (e.g., alphabetical; chronological; part to whole; general to specific; main idea and supporting details; compare/contrast; cause and effect; categorizing).
    - c. Determine an appropriate format to record and organize data/information.
    - d. Use keywords to identify relevant information.
    - e. Avoid plagiarism by correctly recording information word for word and keeping track of the source.
    - f. Use technology to record and organize data/information.
  2. Use an appropriate and accepted citation style to create a source list.
    - a. Explain the purpose of giving credit to sources of information.
    - b. Identify and define the components of a citation given the type of source (book; print encyclopedia; online encyclopedia; Web site; database; periodicals).
    - c. Create a source list using an accepted citation style.
    - d. With guidance, use technology to create a source list in an accepted citation style.
  3. Revisit the information need.
    - a. Reflect upon the need to revise research questions and, with guidance, refine research questions based on new information discovered in the inquiry process
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**Interpret Recorded Data/Information:**  
**Students will be able to follow an inquiry process to interpret recorded data/information to create new understandings and knowledge related to the information need in an ethical manner.**

**A. Interpret Recorded Data/Information**

1. Evaluate and analyze the quality of recorded data/information to meet the information need.
  - a. Identify the main idea of the recorded information.
  - b. Compare recorded information to prior knowledge and make personal connections.
  - c. Evaluate recorded information for relevance, completeness, and, with guidance, accuracy and discrepancies.
  - d. Check recorded information to ensure the information product will contain data/information from multiple sources.
  - e. Find and record missing or additional data/information
2. Apply critical thinking skills and problem-solving strategies to the recorded data/information to meet the information need.
  - a. Determine whether the recorded data/information is fact or opinion and use it appropriately to meet an information need.
  - b. Ethically and accurately summarize and paraphrase the recorded data/information.
  - c. With guidance, identify point of view within the recorded data/information.
  - d. With guidance, identify and analyze patterns within the recorded data/information to create categories.
  - e. With guidance, make connections and inferences using prior knowledge and the recorded data/information.
  - f. With guidance, use technology to support critical thinking skills and problem-solving strategies to meet the information need.
3. Apply ethical practices to the evaluation and analysis of the recorded data/information.
  - a. Explain why ideas, words, images, music (all forms of data/information) are intellectual property and must be cited in a source list.
  - b. With guidance, avoid plagiarism by citing all summarized and paraphrased recorded data/information.
  - c. With guidance, identify possible alternative interpretations applicable to the recorded data/information.

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**B. Create New Understandings and Knowledge**

1. From the recorded data/information, ethically create new understandings and knowledge related to the information need.
  - a. With guidance, synthesize the recorded data/information from multiple sources.
  - b. Draw conclusions from the recorded data/information to create new understandings.
  - c. Reflect and decide on the order in which to organize or present the recorded data/information
  - d. Defend the conclusions drawn from the recorded data/information.

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**Share Findings/Conclusions: Students will be able to follow an inquiry process to share findings/conclusions in an appropriate format to support written, oral, and multimedia information products and evaluate the products and the processes in an ethical manner.**

**A. Share Findings/Conclusions**

1. Use a variety of formats to prepare the findings/conclusions of the information need for sharing.
  - a. With guidance, organize and display findings/conclusions in a variety of formats, including the use of technology.
  - b. With guidance, design layouts that communicate content effectively for intended audiences.
  - c. With guidance, apply appropriate design criteria, which includes universal design principles, to the content and layout of the information product.
  - d. With guidance, use technology to present findings/conclusions in a variety of formats.
  - e. With guidance, edit/review/revise/practice the presentation of the information product.
  - f. Discuss and apply fair use, copyright laws, and Creative Commons attributions.
2. Share findings/conclusions.
  - a. Contribute to a learning community.
  - b. With guidance, practice digital etiquette when sharing findings and conclusions.
  - c. With guidance, credit sources using an appropriate citation format as part of the information product.

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**B. Evaluate the Product and the Process**

1. Evaluate the inquiry process and the information product.
    - a. With guidance, create and apply criteria for evaluating the information product.
    - b. With guidance, use audience feedback and/or peer review to reflect on the information product and the learning experience.
    - c. Reflect on the information need and new knowledge.
    - d. Respond to a directed reflection on the inquiry process and how to use it more effectively and efficiently.
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**Appreciate Literature and Life-long Learning: Students will be able to demonstrate an appreciation of literature and multimedia as a reflection of human experience and use the inquiry process for life-long learning.**

**A. Appreciate Literature and Multimedia**

1. Identify relationships between fiction and nonfiction literature and real life.
  - a. With guidance, read, listen to, view, and discuss literature that reflects personal interests, provides imagined experiences, and validates individual concerns and real experiences.
  - b. Make literature-to-self, literature-to-literature, and literature-to-multimedia connections, and, with guidance, make literature-to-world connections.
    - i. Summarize the main idea in literature and/or multimedia.
    - ii. Identify how various literary elements influence/inform the reader's experience of literature.
  - c. Read, listen to, view, and integrate information from non-fiction to enhance comprehension of fiction.
  - d. Use literature to answer questions or solve problems.
  - e. Use literature to evaluate historical problems, current social events, and personal decisions.
2. Select literature and/or multimedia from the library media center and other libraries for a personal and/or assigned need.
  - a. Follow circulation procedures and policies in the library media center and other libraries.
  - b. Locate and select literature and/or multimedia in a variety of genres.

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**B. Demonstrate Life-long Learning Practices**

1. Connect literature and multimedia to learning.
  - a. Explain the connection between reading, listening, and viewing literature and/or multimedia and being successful in personal and academic pursuits/endeavors.
  - b. Defend literature and/or multimedia choices.
  - c. With guidance, explain why intellectual freedom is important and how it can be preserved.
  - d. With guidance, contribute to a learning community.
  - e. With guidance, adopt new technology or methodology to expand personal and academic pursuits/endeavors.