APPENDIX A: The Inquiry Process

Phase 1: Exploring

Initiating Inquiry, Choosing the Topic, Developing Questions

Knowledge and Understanding:

The student:

- identifies the purpose and features of the inquiry;
- identifies how the topic suits the purpose and features of the inquiry;
- uses prior knowledge and understandings to connect to the topic; and
- identifies a variety of questions about the topic.

Thinking:

The student:

- develops essential questions about the inquiry;
- uses a variety of strategies and resources to choose a relevant topic; and
- uses evaluation criteria for building effective questions for inquiry.

Communication:

The student:

- explains how understanding about the inquiry developed, using a variety of forms;
- uses conventions, vocabulary, and terminology related to choosing the topic for inquiry; and
- explains answers generated about the chosen topic, using a variety of forms.

Application:

The student:

- applies collaborative skills to help understand the purpose and features of the inquiry;
- transfers current knowledge and skills to modify choice of topic of the inquiry; and
- makes connections between current and previous questions/answers.

Sample Activities

Elementary	Secondary
Use concept-mapping software to generate keywords and ideas. Brainstorm possible questions for the inquiry and topic chosen, and classify the questions according to type. Use question-starter words in a W5H framework or use a question matrix. Identify details of assignment using a variety of tools and formats (e.g., product, purpose, audience, learning partnerships, assessment and evaluation). Explore multimedia on the topic and summarize issues raised prior to choosing a topic for inquiry. Develop a physical or virtual space to build the inquiry (e.g. interactive bulletin board, blog, wiki).	Explore print and online reference materials to get an overview of the inquiry and topic chosen. Complete a K-N-R chart or guided mapping activity to give context to the inquiry. Use social networking applications to interview peers on what they know about the topic chosen. Use concept-mapping software to map, classify, and extend prior knowledge and ideas about inquiry. Use Bloom's taxonomy to generate higher-order questions. Develop a physical or virtual space to build the inquiry (e.g. interactive bulletin board, blog, wiki). Develop tools to manage the project timelines (e.g. notification apps, charts).

Assessment Tools

- checklists to detail purpose, nature, and timeline of assignment;
- research portfolios - both digital and in print- to organize the assignment, notes, and conference details;
- rubrics to establish criteria for effective inquiry; and
- scoring charts to record development of Phase 1 knowledge and skills.

Phase 2: Investigating

Designing the Plan, Selecting Information, Formulating the Focus

Knowledge and Understanding:

The student:

- identifies available sources relevant to inquiry; and
- identifies how selected sources support investigation of the topic.

Thinking:

The student:

- uses a variety of strategies to design a plan for, and determine the form of, the presentation;
- uses a variety of strategies to select relevant information; and
- uses conferencing (physical and virtual) to discuss the topic with learning community.

Communication:

The student:

- expresses thoughts and feelings about the inquiry process;
- describes plan for inquiry, using a variety of forms; and
- explains personal focus formulated for inquiry, using a variety of forms.

Application:

The student:

- transfers current knowledge and skills to modify plan of the inquiry;
- applies knowledge of how information is organized to help locate and select information; and
- makes connections between the current focus of inquiry and previous foci.

Sample Activities

Elementary	Secondary
Browse the school library collection and search online catalogues for relevant sources and record information. Develop keywords to search all resources such as full-text online databases and e-books. Read and discuss visual information such as pictures, graphs and illustrations. Employ various skim/scan techniques that match the resource used. Conference with learning partners concerning progress in the inquiry. Make use of “virtual field trips” in addition to actual excursions to enlarge the scope of the inquiry.	Browse the school library collection and search online catalogues for relevant sources and create a preliminary checklist of material consulted. Share social bookmarks. Use both simple and advanced search strategies in a variety of search engines and directories to find relevant information. Deconstruct elements of graphic information (e.g., graphs, charts, diagrams). Ensure a vast array of primary and secondary resources (e.g. people, print, virtual) are explored at this stage. Conference with learning partners concerning progress in the inquiry.

Assessment Tools

- checklists of possible sources of information, and actions taken to locate information;
- conference notes to record teacher conferences, including progress to date, teacher comments, and future plans;
- organizers and templates to plan inquiry and record information and sources;
- rubrics to establish criteria for selecting information, and formulating a focus; and
- scoring charts to record development of Phase 2 knowledge and skills.

Phase 3: Processing

Analyzing Information, Evaluating Ideas, Organizing and Synthesizing Findings

Knowledge and Understanding:

The student:

- identifies the purpose, features, and organization of print, media, and electronic information selected;
- identifies how evidence gathered supports the conclusions of the inquiry; and
- identifies how information and ideas can be sorted and classified for effective organization.

Thinking:

The student:

- uses a variety of strategies to record information from personal knowledge and selected sources;
- develops/uses criteria for evaluating ideas; and
- uses a variety of strategies to revise inquiry, based on new information, ideas, and situations.

Communication:

The student:

- expresses thoughts and feelings about analyzing ideas;
- explains how new knowledge was constructed; and
- explains how findings were drafted, revised, and edited to present to different audiences.

Application:

The student:

- makes connections between personal knowledge and new information;
- applies critical and creative thinking skills to evaluate ideas and information;
- transfers current knowledge and skills to modify product under changing conditions; and
- develops conclusions that are personally significant to learner.

Sample Activities

Elementary	Secondary
Summarize information found in a variety of ways (e.g., sequential storyline, illustration, timeline, video clip) or use an appropriate visual organizer to jot notes to clarify understanding. Use graphic organizers (e.g. T-chart, Venn diagram, information map) to compare information, according to content or validity (i.e. purpose, relevance, accuracy, bias, currency, authority).	Discuss successes and challenges arising during the processing of information and ideas using established physical or virtual spaces. Explore the issues of academic honesty (e.g., plagiarism and copyright) and put into practice. Experiment with established and innovative ways to take notes, record information, and discuss preliminary findings. Create appropriate documentation of information and sources selected using various tools.

Assessment Tools

- checklists to identify information still required to support inquiry;
- exemplars of a variety of forms and presentations;
- rating scales for evaluating and comparing websites;
- rubrics to establish criteria for analyzing, evaluating, organizing, and synthesizing information and ideas;
- scoring charts to record development of Phase 3 knowledge and skills; and
- survey forms to identify inquiry needs prior to processing information.

Phase 4: Creating

Making & Presenting Products, Assessing Product & Process, Extending & Transferring Learning

Knowledge and Understanding:

The student:

- identifies the features of effective presentations;
- identifies the criteria for assessing the product and process of inquiry; and
- identifies possible topics and real-life applications for subsequent inquiry.

Thinking:

The student:

- uses a variety of strategies to create a product that presents findings;
- uses a variety of self- and peer assessment strategies to assess the product and process; and
- uses a variety of strategies to identify skills and knowledge required for subsequent inquiry.

Communication:

The student:

- expresses thoughts and feelings about presentation;
- explains how assessment of product and process of inquiry improves personal learning; and
- explains how new questions, issues, and ideas that emerged during inquiry may generate new learning.

Application:

The student:

- applies knowledge of exemplary practices to make effective products and presentations;
- makes connections between assessment of the current and past inquiries to track improvement information; and
- transfers current knowledge and skills to extend learning into new inquiries/contexts.

Sample Activities

Elementary	Secondary
Use the most appropriate method to support and present findings while honouring the learner's choice (e.g. visual, oral, performance, written, multimedia, digital). Post a presentation on an established physical or virtual space to rehearse and test its effectiveness. Offer opportunities to examine questions for future inquiry (e.g. journaling, online time capsule, role on the wall). Reflect on knowledge gained and the learning journey.	Use the most appropriate method to support and present findings while honouring the learner's choice (e.g. visual, oral, performance, written, multimedia, digital). Document sources using proper citation formats. Post a presentation on an established physical or virtual space to rehearse and test its effectiveness. Offer opportunities to examine questions for future inquiry (e.g. journaling, online time capsule, role on the wall). Reflect on knowledge gained and the learning journey.

Assessment Tools

- anecdotal records for recording reflections about the strengths and challenges of the inquiry process used;
- checklists to chart possible topics, plans, and products for extending the inquiry and transferring learning;
- exemplars of a variety of effective presentations;
- rating scales for assessing product and process;
- rubrics to establish criteria for selecting information, and formulating a focus; and
- scoring charts to record development of Phase 4 knowledge and skills.

From: *Together for Learning: School Libraries and the Emergence of the Learning Commons.*