

THE STUDENT INQUIRY PROCESS

Exploring

INITIATING INQUIRY, CHOOSING THE TOPIC, DEVELOPING QUESTIONS

AS LEARNERS OF INQUIRY, STUDENTS...

- explore topics that are related to the selected curriculum concept(s) using a variety of resources
- use prior knowledge to connect to unit of inquiry
- wonder and ask questions to push their learning further
- sort, prioritize, and re-frame questions, to determine the focus ('big') question that they wish to pursue
- share their thinking and questions with peers and teachers
- make connections between current and previous questions/answers
- discuss possible ways to learn more
- make predictions about possible outcomes or answers

AS PARTNERS IN INQUIRY, TEACHERS AND TEACHER-LIBRARIANS...

- introduce selected curriculum concepts to students to build on prior knowledge and engage in deeper thinking about the topic
- strategically model wondering and making predictions: encourage questions and acknowledge quality of questions being asked
- listen, observe, and talk with students to assess interests, knowledge, and needs
- provide additional information about the topic for students with limited knowledge or experience
- dialogue with students about ways of learning more about the topic
- value student thinking
- encourage/model accountable talk and provide time for student talk
- give descriptive feedback to students to develop rich inquiry questions

AS LEADERS OF INQUIRY, TEACHER-LIBRARIANS...

- encourage students to be curious and excited about the topic of inquiry by providing a 'spark' for it, e.g. books, websites, primary source documents, movies, databases, artifacts, trips, experts
- assist students with asking good questions and inspire them to want to ask questions (through questioning/thinking activities and picture books)
- assist students with brainstorming, sorting, and evaluating questions, ultimately choosing one to be the focus question
- generate vocabulary lists related to the focus question and discuss meanings/connections
- model/teach students how to make their thinking visible
- document the questioning and learning process
- support teachers when using inquiry method to develop effective assessment strategies, curriculum goals, and cross-curricular links
- create a collaborative virtual space to share questioning and build the inquiry 24/7
- network with other educators to share experiences with this curriculum area/topic, and/or technology tool(s)

Investigating

DESIGNING THE PLAN, SELECTING INFORMATION, FORMULATING THE FOCUS

AS LEARNERS OF INQUIRY, STUDENTS...

- use a variety of strategies to select sources, access information, check reliability, record relevant information
- gather information from a variety of resources (3+) across multiple formats, e.g. encyclopedias, books, databases, maps, atlases, ESRI Storymaps, video, archives, field studies, interviews, media
- assess reliability of sources and cite accurately
- use appropriate inquiry and subject specific vocabulary
- demonstrate successful disciplinary thinking
- connect current thinking to previous knowledge
- clarify and extend questions
- talk about observations and thinking to generate more questions
- record information and keep work samples
- determine whether data, evidence, and/or information is complete for this inquiry

AS PARTNERS IN INQUIRY, TEACHERS AND TEACHER-LIBRARIANS...

- select the inquiry strategy focus depending on needs, i.e. teachers provide questions and sources then assess student analysis of information
- co-create "power" question criteria
- extend student thinking with open-ended questions
- introduce tasks using prior knowledge to generate new ideas and explore questions and possibilities
- model how to read, view or listen to record with a question focus
- model how to create, conduct and record interviews
- challenge students' prior knowledge and beliefs
- model how to plan (thoughtbook-forward reflection), observe, and reflect
- provide opportunities for peer and self-assessment to refine or adjust initial plans (co-create checklists)
- encourage student sharing of ideas
- assess student success using disciplinary thinking
- monitor and assess learning using inquiry journals, exit tickets, conferencing, anecdotal notes and provide descriptive feedback to support and improve learning

AS LEADERS OF INQUIRY, TEACHER-LIBRARIANS...

- model digital citizenship and ethical use of intellectual property
- provide a variety of resources to support research and model use of primary and secondary sources
- curate resources
- model use of keywords and search terms for searching books and online sources
- model triangulation of sources to compare information and determine consistency
- explicitly teach bias, point of view and perspective in sources
- model information gathering from a variety of resources
- model different ways to organize research, e.g. mindmapping, sketchnoting, thoughtbook, KWL, RAN charts
- model how to determine information needed using thinking concepts

REFLECTION & FEEDBACK

Creating

MAKING AND PRESENTING, ASSESSING PRODUCT AND PROCESS, COMMUNICATING LEARNING

AS LEARNERS OF INQUIRY, STUDENTS...

- plan ways to express their learning
- consider a variety of representations
- articulate connections between prior knowledge and new discoveries
- answer and refine questions
- pose new, deeper questions for independent investigation
- identify avenues for action and celebrate the learning journey
- reflect on what, how and why learning happened by connecting to learning goals and success criteria
- self assess work using success criteria and disciplinary thinking to determine next steps of learning in an inquiry

AS PARTNERS IN INQUIRY, TEACHERS AND TEACHER-LIBRARIANS...

- facilitate discussions in which students make connections between prior knowledge and new discoveries
- co-develop learning goals and success criteria
- emphasize choice, differentiation and high level thinking about the topic
- challenge and extend students' understandings and skills
- provide opportunities for students to demonstrate the progress of their inquiry
- encourage students to assess their learning and ways of learning by providing timely descriptive feedback
- evaluate student learning related to curriculum expectations
- plan, with students, alternative experiences or avenues of inquiry to gain new or deeper insights
- create opportunities with students to celebrate the learning journey

AS LEADERS OF INQUIRY, TEACHER-LIBRARIANS...

- students to brainstorm multiple ways of sharing learning that would optimise their inquiry
- encourage students to consider their audience and purpose when sharing their inquiry
- facilitate the integration of technology by reflecting on proven models
- foster metacognition, allow students to justify their sharing strategy
- collaborate with teachers to create appropriate assessment of learning
- match Web applications with student learning needs to facilitate equitable 24 hour access
- create opportunities for teachers and students to self reflect on the inquiry process
- allow for various and appropriate forums for students to showcase their learning
- provide ongoing coaching for students to apply their understanding of digital citizenship
- explore avenues to share student inquiry globally

ANALYZING THE INFORMATION, EVALUATING IDEAS, ORGANIZING AND SYNTHESIZING FINDINGS

Processing

AS LEARNERS OF INQUIRY, STUDENTS...

- identify important information or ideas in each source of information to support conclusions of the inquiry using disciplinary thinking concepts and criteria
- use thinking concept criteria to identify how evidence gathered supports conclusion of the inquiry
- record information from sources in graphic organizers to analyze, compare, sort, classify, and recognize patterns in their inquiry
- use mind mapping tools to create timelines, compare/contrast and sort information
- analyse sources of information to determine the importance of an event, development or issue for individuals and/or groups using disciplinary thinking
- think and use a variety of strategies to revise inquiry based on new information, ideas and criteria
- use evidence and data to evaluate and draw conclusions connecting to big ideas and disciplinary thinking concepts
- co-create criteria to form judgements and evaluations using disciplinary thinking, i.e. What makes something significant?
- use criteria to analyze inferences, information and judgements made to determine if more information or thinking is needed
- evaluate sources of information for accuracy, credibility, bias and usefulness
- identify biases in sources of information and ensure a balanced perspective
- use co-constructed inquiry success criteria to determine improvements to notes, thinking, judgement or evaluation

AS PARTNERS IN INQUIRY, TEACHERS AND TEACHER-LIBRARIANS...

- model the disciplinary thinking concepts
- introduce new concepts, processes, and skills that relate to the inquiry using disciplinary thinking concepts
- assist students to review and analyze notes for importance and relevancy
- encourage use of graphic organizers to organize, analyze and think about their inquiry using SSHG thinking concepts
- assist students with prompts to think about their analysis and evaluation
- observe and strategically question students to clarify and extend their thinking
- provide opportunities for students to demonstrate their understanding, skills and new learning in a variety of ways
- revisit initial questions and thinking with students, providing opportunities to extend their inquiry
- co-construct success criteria with students to support them as they complete inquiry tasks
- provide opportunities for self and peer assessment that revisit the initial engagement questions and reflect back on co-created success criteria
- assess and evaluate student achievement based on conversations, observations and products

AS LEADERS OF INQUIRY, TEACHER-LIBRARIANS...

- model ways to determine if enough evidence has been collected from reliable sources to answer the inquiry question
- show students how to interpret and analyze primary and secondary sources
- strategically model ways to describe patterns, analyze, draw conclusions to synthesize information
- co-create with students criteria needed to enable critical thinking and to evaluate information
- model ways to include a balance of perspectives
- assist students in recognizing bias
- assist students to evaluate sources or information for bias, credibility, accuracy and usefulness
- provide a variety of tools to evaluate sources
- incorporate the professional learning community to verify and strengthen information
- support students to cite sources properly