Inquiry-Based Curriculum:
Library and Information Skills for 21st-Century Learners

CONNECT

REFLECT / ASSESS

EXPRESS

PREPARE / CREATE

FOCUS

INVESTIGATE
Twenty-first century learners will use inquiry to build understanding.

“I am a thinker.”

Inquiry provides a framework for learning. An independent learner asks questions and accesses, evaluates, and uses information effectively to develop new understandings.

INQUIRY PHASE: EXPLORE and CONNECT

Key Dispositions of the 21st-century Learner:

- Curiosity
- Engagement
- Active participation
- Adaptability
- Self-direction

At the beginning of the Connect Phase, a student may ask:

- What interests me about this idea or topic?
- What do I already know or think I know about this topic?
- What background information would help me get an overview of my topic?

INDICATORS - 21st-century Learner:

- Explores and connects ideas to self; finds personal meaning.
- Connects ideas to previous experience and knowledge.
- Acquires background information and knowledge of context through observation, experience and reading.
- Identifies key concepts and terms related to the topic.
- Identifies the “big picture” and how it connects to the world.
- Asks clarifying questions.
- Recognizes the need for information.
  - Develops an awareness of criteria and components of final product.

Before moving to the Focus Phase, a student may ask:

- Do I know enough about the idea or topic to ask good questions?
- Am I interested enough in the idea or topic to investigate it?
- Can I state what I know about the topic, problem or big ideas?
INQUIRY PHASE: FOCUS

Key Dispositions of the 21st-century Learner:
• Confidence
• Self-direction
• Adaptability
• Persistence
• Questioning
  • Seeking information about new ideas
    • Inquisitiveness

At the beginning of the Focus Phase, a student may ask:
• Why am I doing this investigation?
• What do I expect to find?
• What are the questions I need to answer?
• What kind of product will I be creating, and who is my audience?

INDICATORS - 21st-century Learner:
• Identifies purpose for inquiry.
• Maintains an awareness of final product (criteria and components).
• Determines intended audience.
• Formulates preliminary questions and ideas to focus on.
• Develops research questions, thesis or hypothesis to guide inquiry.
• Distinguishes the types of information needed to answer questions with relevant, appropriate sources.
  • Refines, focuses, and limits scope of the question.

Before moving to the Investigate Phase, a student may ask:
• Do my questions lead me to answers that will fulfill my assignment?
• What kind of information will be useful to my final product?
INQUIRY PHASE: INVESTIGATE

Key Dispositions of the 21st-century Learner:
• Personal productivity
• Self-direction - self monitoring
• Adaptability
• Persistence
• Personal responsibility
• Truth seeking
• Team work / collaboration
• Strategic action
• Motivation

At the beginning of the Investigate Phase, a student may ask:
• What are all of the sources that might be used?
• Which sources will be most useful and valuable?
  • How do I locate these sources?
• How do I find the information within each source?
• How do I evaluate the information that I find?

INDICATORS - 21st-century Learner:

ACCESS:
• Applies background knowledge to understand libraries and information environments.
• Locates a variety of information sources.
  • Identifies and uses appropriate resources in print and digital formats
  • Uses indexes, catalogs and other search tools to access relevant print or digital information.
  • Uses organizational features in both print and digital resources.
• Locates information from diverse sources, genres, points of view, and formats to construct the big picture.

ANALYZE:
• Uses print or digital sources competently for inquiry.
• Refines and expands synonyms and keywords related to the topic.
• Uses reading and thinking strategies to comprehend information and construct meaning.
• Uses visual literacy strategies to derive meaning from visual information and media.
• Interprets, evaluates and appreciates visual information and media.
• Selects and records appropriate information in an effective note-taking process.
• Puts information into own words.
• Analyzes information from multiple, varied sources and formats for usefulness and relevance.
• Reconciles contradictions, opposing ideas, gaps in information.
• Participates productively in groups to define problems and pursue information.

ASSESS:
• Critically evaluates information sources for bias, relevance, accuracy, reliability, and authority.
• Monitors progress and changes direction as necessary.
  • Self-assesses for ethical use of intellectual and creative property.
  • Checks progress to generate conclusions, connections and new ideas.

Before moving to the Construct/Create Phase, a student may ask:
• Have I located sources with diverse perspectives?
• Have I found enough accurate information to answer all my questions?
• Have I discovered information gaps and filled them with more research?
• Have I begun to identify relationships and patterns and thoughtfully reacted to the information I found?
Key Dispositions of the 21st-century Learner:
- Critical thinking
- Confidence
- Adaptability
- Engagement
- Persistence
- Seeking perspectives
- Collaboration
- Critical stance
- Creativity

At the beginning of the Construct/Create Phase, a student may ask:
- What does the information mean? How can I organize the information? Is all of the information useful?
- What is the main idea? What is the evidence that supports the main idea?
- What are the similarities and differences among the sources? Is there contradictory information? How can I resolve the differences?
- How does the new information compare to my earlier knowledge?
- How do my ideas connect with each other?
- How have my ideas changed as a result of my investigation?
- Does the new information agree with my thesis?
- Do I need more information? Do I need to revise my thesis?
- What conclusions can I draw from my evidence? What examples show that my evidence supports my conclusions?
- Which parts of my problem solving process were successful?

INDICATORS - 21st-century Learner:
- Understands, organizes, and evaluates information using an outline or organizer tool.
- Clarifies main and supporting ideas using evidence, examples, data, and details.
- Connects and compares ideas from various sources and addresses contradictory information.
- Connects information with prior knowledge, evidence and examples.
- Revises questions or hypothesis as needed.
- Evaluates inquiry process and resources used.
- Discovers relationship among ideas.
- Reviews and reflects how ideas changed with more information.
- Identifies when information does not support tentative thesis.
- Gathers additional information as needed.
- Demonstrates new understanding by drawing relevant conclusions supported by evidence.
- Participates productively in groups to generate information.
- Creates first draft of product.

Before moving to the Express Phase, a student may ask:
- Does my draft/product meet all requirements?
- Have I drawn conclusions that are supported by the evidence?
- Have I organized my information to present it effectively?
- Have I checked for problems and/or gaps?
Key Dispositions of the 21st-century Learner:

- Creativity
- Responsibility
- Mastery
- Self-confidence
- Social Responsibility
  - Leadership and confidence in expressing ideas
    - Presents meaningful grasp of complexity

At the beginning of the Express Phase, a student may ask:

- What type of product or presentation will allow me to present my evidence and conclusions effectively to the intended audience?
- What technology will help me create a product or presentation?
  - Have I included everything I need to fulfill the requirements of the assignment?
  - Have I practiced enough to be confident in communicating my ideas?

INDICATORS - 21st-century Learner:

- Demonstrates and communicates an authentic, meaningful and deep understanding of material presented.
- Transforms information to knowledge (meaning and impact).
- Explores diverse presentation formats (i.e. written products, oral and visual presentations, technology products, and/or various combinations).
- Determines appropriate presentation format.
- Creates final product through drafting, reflection, and revision.
- Uses standard citation conventions.
- Rehearses / prepares presentation of product.
- Presents / communicates final product using appropriate format / technology.
- Uses writing process to develop expression of new understandings.

Before moving to the Reflect Phase, a student may ask:

- Have I organized the product / presentation to make my major points and present convincing evidence?
- Did my product / presentation fulfill all the requirements of the assignment?
  - Have I practiced enough to be confident in communicating my ideas?
INQUIRY PHASE: REFLECT/ASSESS

Key Dispositions of the 21st-century Learner:
- Validating accuracy
- Reflection
- Receives criticism and feedback with open mind
- Actively listens
- Testing conclusions
- Questions own views
  - Critical stance
  - Social responsibility

At the beginning of the Reflect/Assess Phase, a student may ask:
- Was my product/presentation as effective as I could make it?
  - How well did my inquiry process go?
  - What are the questions I need to answer?
- Did I fulfill all the requirements of the assignment?

INDICATORS - 21st-century Learner:
- Develops evaluative criteria.
- Participates in peer evaluation.
- Engages in self-evaluation.
- Asks new questions for continuing inquiry.

Before moving to another assignment or personal inquiry, a student may ask:
- What new understandings did I develop about the topic or idea?
  - What did I learn about the inquiry process?
  - What might I do differently next time to improve my inquiry process or product?
- How can I use the feedback on my final product for my next inquiry project?
SOCIAL AND ETHICAL RESPONSIBILITY

**Key Dispositions of the 21st-century Learner:**

- Ethical responsibility
- Collaboration
- Respect
- Validating accuracy
- Seeking perspectives
- Initiative
- Using patterns of evidence to draw conclusions
  - Shows tolerance for perspectives
  - Regulates and assesses behavior
  - Questions own views

**INDICATORS - 21st-century Learner:**

- Seeks and uses diverse sources and multiple points of view.
- Cites sources accurately and identifies sources of ideas, information, images, and sounds.
- Respects intellectual property rights and seeks permission from a source of ideas, information, images and sounds where appropriate.
- Respects and acknowledges diverse ideas, perspectives and backgrounds.
- Contributes to the development and exchange of ideas within the learning community and world.
- Collaborates with others, both in person and through technologies, to design, develop and evaluate information products and solutions.
- Practices safe behaviors in electronic communication and on social networking sites.
- Protects and respects the network of print, electronic and digital resources.
- Reflects on the product and the process.

**At the beginning of this Phase, a student may ask:**

- How can I say things in my own words?
- What does academic integrity mean in my school? Is there a policy? What are the consequences of plagiarism?
- Why should we appreciate the opinions of others in a global society?
- Why is it important to cooperate within a group?

**Before moving to another assignment or personal inquiry, a student may ask:**

- Is this my own work?
- Is this my creation?
- Did I get appropriate permissions for information, sounds, and images I used?
- Did I cite my sources?
**LITERATURE and LITERACY**

**Engaged Reading**

*Key Dispositions of the 21st-century Learner:*
- Self-direction
- Curiosity
- Reading skills
- Projects self into another’s experience
- Sustained intellectual activity
  - Reflection
    - Flexibility
    - Initiative

*At the beginning of Engaged Reading, a student may ask:*
- Where do I find choices of reading and / or viewing resources that will match my interests?
- How do I find out about books and films I will enjoy?

*INDICATORS - 21st-century Learner:*
- Will seek information related to personal interest and pleasure.
- Selects literature based on personal needs, interests, and reading level from a variety of genres.
- Identifies and differentiates between fiction and non-fiction.
- Uses technology to find information in a variety of formats related to personal interests and social interaction.
- Explores award winning works of literature and note-worthy authors, illustrators, and producers.

*Before moving to another assignment or personal inquiry, a student may ask:*
- Have I read and reflected on books and other media?
  - Was I able to locate and reflect on literature and other media that suits my personal interests?
  - Did I become familiar with authors?
Literary Response, Critical Analysis and Evaluation

Key Dispositions of the 21st-century Learner:

- Critical thinking
- Self-directed
- Reflective
- Curiosity
- Using patterns of evidence to draw conclusions
- Openness to new ideas
- Questioning
- Extends investigation
  - Looks for alternate points of view
    - Validates accuracy
    - Persistence

INDICATORS - 21st-century Learner:

- Seeks information related to various dimensions of personal well being, such as career interests, community involvement, health matters, and recreational pursuits.
- Explores a variety of media for reading, listening and viewing purposes.
- Recognizes author’s purpose: persuade, inform, or entertain.
- Uses inferences and deduction to understand.
- Identifies elements of fiction (character, plot, setting, style, theme, point of view) in personal reading.
- Recognizes characteristics of genres.
- Compares and contrasts literature published in different media.
- Thinks and speaks critically about literature.
  - Utilizes elements of non-fiction (table of contents, index, bold faced type, glossary, captions, time lines, diagrams, and keywords).
    - Identifies parts of a book (cover, spine, title page, copyright date, spine label).
      - Differentiates between fact and opinion.

At the beginning of the Critical Analysis and Evaluation Phase, a student may ask:

- Am I able to critically analyze the material?
- What elements of the text or other media will help me understand?
  - What is the connection between literature and the world?

Before moving to another assignment or personal inquiry, a student may ask:

- Did I understand the author’s meaning?
- Do I understand the connection between literature and the world?
  - Can I recognize literary elements?
- Was I able to critically analyze the literature?
ACKNOWLEDGMENTS

This document was created to embrace the national paradigm shift for educating the 21st-century learner. Its purpose is to provide librarians and teachers with a research and learning model that embraces a collaborative approach to questioning, investigating, problem solving, creating, and contributing.

We would like to thank the librarians of our WSWHE BOCES component school districts for the time they devoted to creating this document. In addition we would like to acknowledge the previous efforts of librarians and teachers from the Sullivan County BOCES, Cap Region BOCES, and the New York City School Library System (Information Fluency Regional Continuum), for their ideas and providing a framework to build upon. The ISTE, National Educational Technology Standards for Students and the AASL Dispositions and Responsibilities for 21st-century learners also helped to shape our document and transform our approach to research and instruction for the 21st-century student.