



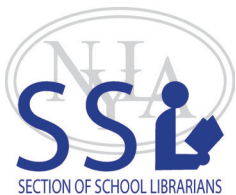
# Empire State Information Fluency Continuum

PK-12 Priority Skills

The information and inquiry skills  
required for in-depth learning



Developed by Dr. Barbara Stripling and New York State School Librarians

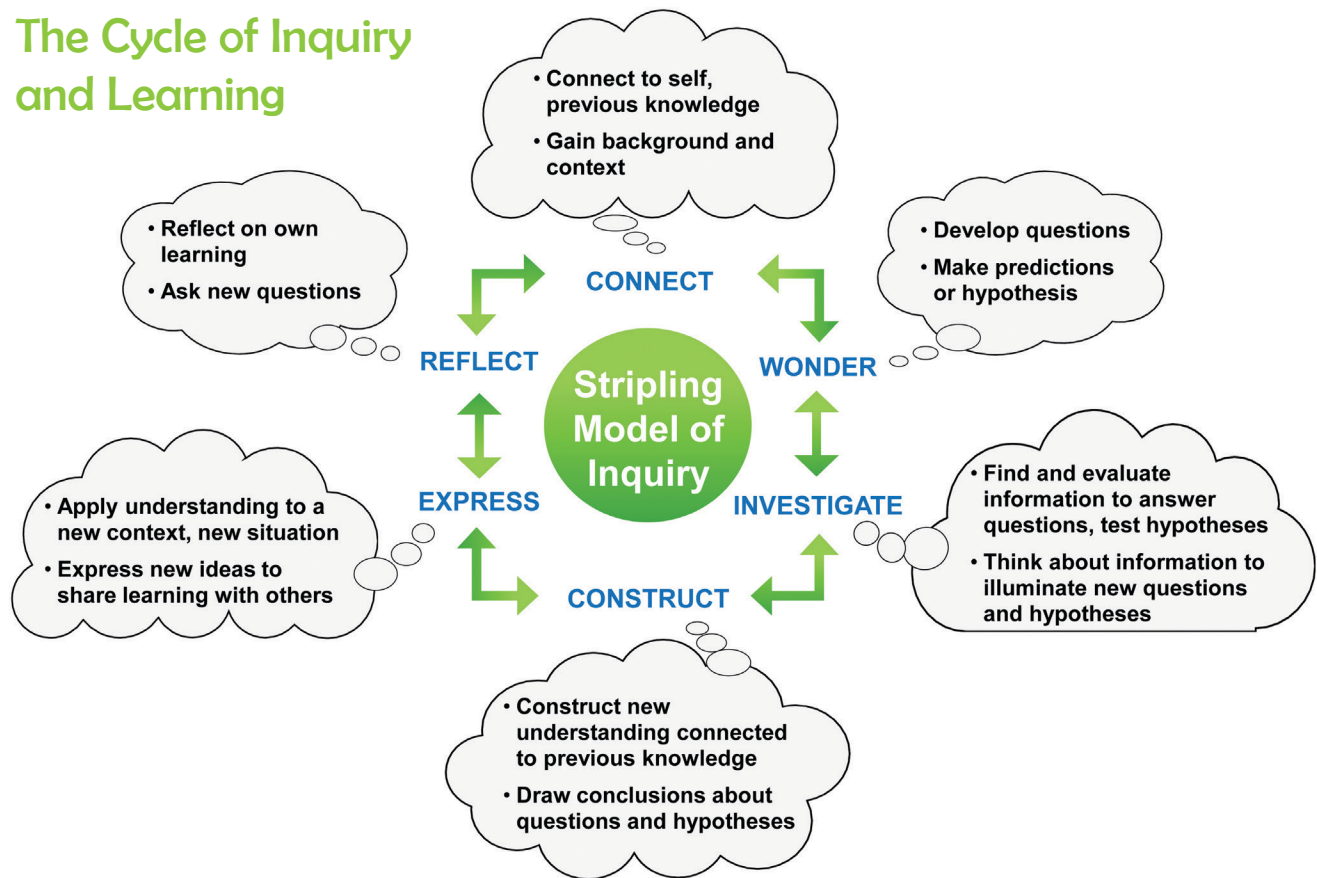


# The information and inquiry skills required for independent and in-depth learning

Inquiry is a fundamental building block of teaching and learning that empowers students to follow their sense of wonder into new discoveries and insights about the way the world works. The empowered learner calls upon information/inquiry skills to connect with what he or she knows, ask intriguing questions about what is not known, investigate the answers, construct new understandings, and communicate to share those understandings with others.

Students need to use the skills of inquiry to learn. The Cycle of Inquiry and Learning provides a framework for active learning and the formation of new understandings.

## The Cycle of Inquiry and Learning



Developing the skills of inquiry and learning must follow a coherent spiral of instruction and practice throughout the years of schooling, pre-kindergarten through grade 12, to enable all our children to become independent life-long learners.

The Empire State Information Fluency Continuum (ESIFC) was developed to provide a substantive guide for educators and librarians seeking to develop those essential information and inquiry skills for students. A collaborative approach by the librarian and the classroom teacher is by far the most effective way to teach information fluency/inquiry skills and strategies. This continuum is designed to facilitate that collaboration.

# GRADE Pre-Kindergarten

## STANDARD 1: INQUIRY AND DESIGN THINKING

### Connect

- Expresses curiosity about topics of personal interest or curricular focus

### Wonder

- Asks questions in response to listening to a variety of texts

### Investigate

#### Sources

- Recognizes the library has many different kinds of materials and locates the picture book section

### Construct

- With help, sorts and categorizes “like” and “different” objects

### Express

- Draws a picture to illustrate a response to a story
- Recognizes the difference between own drawing or creation and someone else’s drawing or creation

### Reflect

- Identifies own strengths in listening, reading, and learning

### Design Thinking

- Uses resources and active-learning activities provided by the teacher for learning-driven play

## STANDARD 2: MULTIPLE LITERACIES

- Participates in discussions about stories and other texts that have been read aloud

## STANDARD 3: SOCIAL AND CIVIC RESPONSIBILITY

- Participates in collaborative conversations with peers and adults to share ideas and information

## STANDARD 4: PERSONAL GROWTH AND AGENCY

- Develops and pursues personal curiosity
- Respects personal space and the boundaries of others [social awareness]
- Reflects on own feelings and behaviors to figure out personal strengths and preferences

# GRADE Kindergarten

## STANDARD 1: INQUIRY AND DESIGN THINKING

### Connect

- Connects ideas to own interests

### Wonder

- With help, begins to develop questions to be answered in shared research

### Investigate

#### Organization

- With help, begins to use library labels and ABC arrangement of picture books to locate materials

#### Evidence

- Identifies facts about a topic, idea, or problem

### Construct

- Verbally and physically demonstrates simple organizational skills such as sorting and categorizing objects and information

### Express

- Uses emergent writing and drawing to present facts and simple answers to questions
- Recognizes the difference between own ideas and ideas of others

### Reflect

- Identifies own strengths in listening, reading, and learning

### Design Thinking

- Uses resources and active-learning activities provided by the teacher to investigate new ideas or solve problems

## STANDARD 2: MULTIPLE LITERACIES

- Retells a story with the correct sequence of events using words and pictures

## STANDARD 3: SOCIAL AND CIVIC RESPONSIBILITY

- Listens and responds to multicultural texts from various genres
- Works collaboratively with a small group using technology for research to meet information needs
- Respects the ideas of others by listening carefully to them and responding to their ideas

## STANDARD 4: PERSONAL GROWTH AND AGENCY

- Requests/chooses materials related to personal interests
- Displays compassion and acceptance for others in class conversations and responses to diverse texts [relationship skills]
- Expresses own ideas and feelings to others in a respectful and appropriate way

**STANDARD 1: INQUIRY AND DESIGN THINKING****Connect**

- Shares what is known about the general topic to elicit and make connections to prior knowledge

**Wonder**

- Develops “I Wonder” questions with the class while reading or listening to texts about the research topic

**Investigate****Sources**

- Recognizes the systematic way the library organizes fiction and picture books and that fiction books of interest can be located by using that organization

**Evidence**

- Distinguishes between fact and opinion
- Begins to recognize different points of view of characters in a story

**Making Sense of Information and Notetaking**

- With help, finds facts and briefly summarizes them via writing, drawing, or verbalization to answer basic research questions

**Construct**

- Sorts books by fiction vs. nonfiction
- Participates in discussions to draw conclusions about a topic or story

**Express**

- Uses writing process, emergent writing, and drawing to develop expression of new understandings
- With help, makes a list of the source(s) used with title and author

**Reflect**

- Identifies own strengths and sets a goal for improvement
- With help or with the class, asks, “What do I wonder about now?”

**Design Thinking**

- Engages actively with a small group in trying out a solution, looking at the results, and making changes to improve the results

**STANDARD 2: MULTIPLE LITERACIES**

- Draws and shares conclusions about main idea of a story
- Identifies main ideas, facts, details, and opinions expressed through media other than print

**STANDARD 3: SOCIAL AND CIVIC RESPONSIBILITY**

- Listens and responds to multicultural texts from various genres
- Contributes to group media project to communicate ideas to classmates, families, and others
- Credits authors and resources for all information that was used or shared
- Creates and uses effective username that protects private information

**STANDARD 4: PERSONAL GROWTH AND AGENCY**

- Engages in simple and independent inquiry to find answers to questions
- Develops and displays empathy for others by recognizing why they are behaving and speaking in a certain way [social awareness]
- Actively engages in conversations with others by contributing own ideas and displaying confidence in own reasoning and opinions

**STANDARD 1: INQUIRY AND DESIGN THINKING****Connect**

- Responds to background information (delivered through videos, stories, texts, discussions) by restating/retelling main ideas and details about the topic

**Wonder**

- Develops “I wonder” questions independently while reading or listening to texts about the research topic

**Investigate****Sources**

- Recognizes that sources can be located in the online catalog by looking up the author, title, or key words
- Identifies the author or creator of a website

**Evidence**

- Identifies main ideas and key details in a text
- Interprets information represented in pictures, illustrations and simple charts and verbalizes the main idea

**Construct**

- Develops own opinion about a topic with evidence to support the opinion

**Express**

- Organizes information by main ideas and important details
- Presents researched information in a variety of ways (e.g., art, music, poetry, movement, verbally, and /or written language)
- Makes a list of the source(s) used with title and author

**Reflect**

- Identifies own strengths and sets a goal for improvement
- Asks, “What do I wonder about now?”

**Design Thinking**

- Engages actively in a design process to use tools and materials to try out a new idea or solution to a problem, assess the results, and try a different solution when necessary

**STANDARD 2: MULTIPLE LITERACIES**

- Compares characters in two different stories, or plots in two stories by same author
- Gathers information from illustrations and text features

**STANDARD 3: SOCIAL AND CIVIC RESPONSIBILITY**

- Compares folktales or stories from different cultures
- Respects the rights of others to express ideas, use the library, and have equitable access to the resources by listening respectfully, following the rules and procedures of the library, and returning all resources on time
- Participates in shared research and exploration about a topic
- Acknowledges the ideas of others and connects them to own ideas when participating in discussions and group learning opportunities
- Takes notes to answer research questions by writing down words and phrases and drawing pictures from sources, but not copying whole sentences
- Understands acceptable and unacceptable computer usage according to the Acceptable Use Policy related to the use of technology
- Identifies behaviors that are examples of cyberbullying and demonstrates effective responses

**STANDARD 4: PERSONAL GROWTH AND AGENCY**

- Selects fiction and nonfiction books or media to read and enjoy on own
- Displays resiliency by responding to feedback or failure and revising own work [self-awareness]
- Asks others for clarification of their ideas and offers own ideas during conversations and discussions

## STANDARD 1: INQUIRY AND DESIGN THINKING

### Connect

- Uses a source provided by the teacher to acquire background information

### Wonder

- Formulates questions for investigation of a topic with guidance

### Investigate

#### Organization

- Identifies major areas of the library (e.g., Dewey areas; genre areas) and what main topics are included in each

#### Sources

- Searches the online catalog (author, title, and key words) with assistance to locate materials
- With guidance, uses bookmarked websites to find appropriate information

#### Evidence

- Selects evidence that explicitly answers the research questions with main ideas and details
- Begins to understand that different points of view are presented in nonfiction and that nonfiction does not equate to “true” because some of the information may be opinion or stated from only one point of view
- With help, begins to ask questions about the text during reading or listening

#### Making Sense of Information and Notetaking

- Uses simple notetaking strategies (e.g., graphic organizers)

### Construct

- States the main idea with some supporting details
- Draws conclusions about research including whether a question was answered or not

### Express

- Chooses the format for the product based on personal preference or uses format chosen by the teacher or librarian
- Presents information clearly so that main points are evident

### Reflect

- Identifies own strengths and sets goals for improvement

### Design Thinking

- Engages actively in a design process to use tools, resources, and materials to try the brainstormed solutions, assess the results, and modify the solutions when needed

## STANDARD 2: MULTIPLE LITERACIES

- Discusses the main idea or theme of a story
- Explains the meaning of illustrations and what they add to the words of a story
- Evaluates a media source for accuracy

## STANDARD 3: SOCIAL AND CIVIC RESPONSIBILITY

- Verifies information that is presented as “the truth”
- Engages in conversations with peers to exchange ideas and information about social and civic issues
- Actively contributes to group discussions
- Demonstrates basic cybersafety (strong passwords, privacy, accessing appropriate sites)

## STANDARD 4: PERSONAL GROWTH AND AGENCY

- Demonstrates motivation to read and learn on own
- Identifies and empathizes with the perspectives of others [social awareness]
- Forms positive relationships with peers [relationship skills]
- Displays self-confidence in forming and sharing own opinion and ideas



## STANDARD 1: INQUIRY AND DESIGN THINKING

### Connect

- Identifies aspects of the broad topic that would be important and interesting to pursue through inquiry

### Wonder

- Begins to predict answers to inquiry questions based on background knowledge and beginning observation or experience with help

### Investigate

#### Organization

- Identifies and uses the organizational structures of a nonfiction book (table of contents, index, and glossary) to locate information

#### Sources

- Uses pre-selected primary sources to gather information; compares primary and secondary sources on the same topic

#### Evidence

- Uses textual and visual elements (title, headings, graphics, photos) to read and comprehend information on websites
- Makes inferences (with guidance) about the implicit meaning in text to answer research questions and recognizes the difference between explicit and implicit meaning

#### Making Sense of Information and Notetaking

- Paraphrases, summarizes information that answers research questions, noting what is fact and what is opinion

### Construct

- With help, uses common organizational patterns (chronological order, main idea with supporting details) to organize information
- Identifies facts, details, and inferences that support main ideas
- Draws a conclusion about the main idea with evidence to support that conclusion

### Express

- Determines the purpose of a presentation (e.g., explanation, claim) and decides how to organize ideas to explain a topic or make a claim about it
- Understands concept of “audience”; determines audience before choosing format and creating product
- Assesses and revises own work based on teacher-provided criteria

### Reflect

- Identifies the important features for a good product and presentation
- Identifies own strengths and sets goals for improvement

### Design Thinking

- Engages actively in a design process to use tools, resources, and materials to try the “if. . .then” solutions that seem to have the most potential, assess the results, and modify the solutions when needed

## STANDARD 2: MULTIPLE LITERACIES

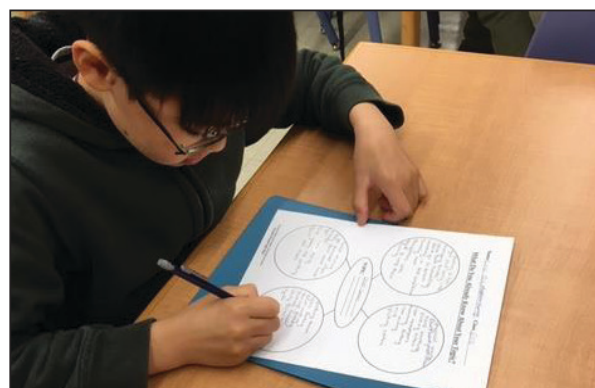
- Uses evidence from stories to discuss characters, setting, plot, time, and place
- Analyzes information presented visually through illustrations, photographs, diagrams, or maps to determine main ideas and compare to ideas presented in printed text
- Evaluates a media source for accuracy and purpose
- Creates and delivers presentation with attention to quality of content, effective use of tool, and self-confidence and effectiveness of delivery

## STANDARD 3: SOCIAL AND CIVIC RESPONSIBILITY

- Works with a group to do research, share results and resources, discuss issues, make decisions, and create learning products
- Uses strategies to avoid plagiarizing by summarizing, paraphrasing, quoting, and crediting the information used
- Demonstrates basic netiquette behavior by interacting respectfully with others and contributing to a positive online community

## STANDARD 4: PERSONAL GROWTH AND AGENCY

- Identifies favorite authors, genres, and topics and explores them on own
- Identifies and respects cultural differences and diverse opinions [social awareness]
- Recognizes multiple facets of own personal identity



## STANDARD 1: INQUIRY AND DESIGN THINKING

### Connect

- Generates a list of key words for a research-based project with guidance

### Wonder

- Begins to assess questions to determine which can be answered by simple facts, which cannot be answered, and which would lead to an interesting inquiry
- Forms tentative thesis about main ideas with guidance
- For science topics, forms hypothesis (“if . . . then” statement) that can be “tested” through research or experiment/experience

### Investigate

#### Sources

- Evaluates print, video, and electronic sources (both primary and secondary) for relevance to the topic and credibility of author/creator/publisher
- Selects and uses an appropriate print, video, or electronic source to answer questions

#### Evidence

- Uses navigation tools of pre-selected websites and databases to locate relevant information
- Evaluates information within a source for accuracy, relevance, comprehensiveness, and point of view
- Begins to analyze multiple points of view from multiple sources to determine similarities and differences

#### Making Sense of Information and Notetaking

- Uses a variety of strategies to determine important ideas (e.g., looking at ideas featured in introduction and conclusion, analyzing information highlighted in boxes or charts, paying attention to the topic of each paragraph, noting the amount of supporting details for the topic of each paragraph)
- Uses various notetaking strategies (e.g., outlining, underlining, bulleted lists, highlighting, graphic organizers) dependent on purpose

### Construct

- With help, organizes notes and ideas and develops an outline, mind map, or graphic organizer
- Forms own opinion or claim and uses evidence from texts and clear reasoning to back it up

### Express

- Presents information clearly so that main points and supporting evidence are readily understood by audience
- Modifies and revises own work based on feedback from teacher and peers
- Provides a bibliography of all sources used according to model provided by teacher

### Reflect

- Reflects on new understandings, the effectiveness of the product and presentation, and the experience of the process of inquiry
- Identifies own strengths and sets goals for improvement

### Design Thinking

- Engages actively in a design process to use tools, resources, and materials to test the hypothesis by creating a solution, assessing the results, modifying the solution when needed, and determining the validity of the hypothesis

## STANDARD 2: MULTIPLE LITERACIES

- Identifies the author’s or narrator’s point of view and explains how it influences the portrayal of the characters and the sequence of events in the plot
- Evaluates the effect of different media elements (e.g., pace, visuals, color) on the overall impact of the media source

## STANDARD 3: SOCIAL AND CIVIC RESPONSIBILITY

- Identifies and challenges own assumptions about community issues and diverse cultures by seeking and considering multiple viewpoints and cultural perspectives
- Recognizes the right to express own opinion in an appropriate manner, even when the opinion differs from the ideas of others
- Actively solicits and listens with an open mind to the opinions and ideas of others
- Engages in positive online behavior by dealing with cyberbullying, recognizing and avoiding stereotypes, and selecting appropriate sites only

## STANDARD 4: PERSONAL GROWTH AND AGENCY

- Follows personal and academic interests to pursue in-depth inquiries and build deep knowledge
- Sets reading and learning goals and perseveres to achieve those goals [self-management]
- Reflects on own social and emotional strengths and challenges [self-awareness]
- Exhibits effective skills in sharing knowledge gained through personal and academic pursuits

## STANDARD 1: INQUIRY AND DESIGN THINKING

### Connect

- Identifies key words and ideas that appear in background information and class conversation

### Wonder

- Assesses questions to determine which can be answered by simple facts, which cannot be answered, and which would lead to an interesting inquiry

### Investigate

#### Sources

- Begins to use selected search engines to find appropriate information
- Uses online catalog independently to locate specific books, get classification numbers, and browse the shelves
- Evaluates, selects, and uses both primary and secondary sources with attention to perspective and comprehensiveness

#### Evidence

- Selects information from multiple sources that answers the research questions

### Making Sense of Information and Notetaking

- Differentiates between important and unimportant details
- Takes notes using one or more of a variety of notetaking strategies (e.g., outlining, underlining, bulleted lists, highlighting, graphic organizers, reflective notetaking)

### Construct

- Interprets information and ideas by defining, classifying, and inferring

### Express

- Presents conclusions and supporting facts in a variety of ways
- Cites all sources used according to local style formats

### Reflect

- Identifies own strengths (academic, social, and emotional) and sets goals for improvement

### Design Thinking

- Selects and uses resources and technology to investigate identified problems through active experimentation, experience, creation, and engagement

**STANDARD 2: MULTIPLE LITERACIES**

- Participates in literary discussions and book clubs
- Evaluates the impact of media by looking at the use of the language of the medium (e.g., use of color, pace, perspective, visuals)
- Develops the skills of public speaking (e.g., clear delivery, eye contact, body language, voice, pace)

**STANDARD 3: SOCIAL AND CIVIC RESPONSIBILITY**

- Evaluates and compares the authority, credibility, accuracy (by fact-checking), and point of view of all sources of information
- Expresses own opinion in an appropriate manner, even when the opinion differs from the ideas of others
- Abides by the Acceptable Use Policy by accessing only appropriate information and using technology responsibly

**STANDARD 4: PERSONAL GROWTH AND AGENCY**

- Sets reading goals and reads independently
- Builds trusting relationship with diverse peers and adults through collaboration and communication [relationship skills]
- Demonstrates respect for diverse people and perspectives [social awareness]
- Exhibits effective skills in sharing knowledge gained through personal and academic pursuits

**STANDARD 1: INQUIRY AND DESIGN THINKING****Connect**

- States and verifies what is known about the problem or question and makes connections to prior knowledge

**Wonder**

- Writes questions that would lead to an inquiry independently based on key ideas or areas of focus
- Analyzes and evaluates what is known, observed or experienced to form tentative thesis or hypothesis

**Investigate****Sources**

- Uses the structure and some navigation tools of a Website to find the most relevant information (menu bars, tabs, buttons, sidebars)

**Evidence**

- Evaluates quality of information within electronic and print sources for usefulness, currency, authority, and accuracy
- Evaluates the effect of different perspectives and points of view on information (e.g., why some information is included, why other information is left out)
- Fact checks and verifies all information communicated through websites and social media

**Making Sense of Information and Notetaking**

- Uses both facts and opinions responsibly by identifying and verifying them
- Evaluates the development of an argument or claim and the strength of the supporting and refuting evidence provided within the source

**Construct**

- Uses common organizational patterns (e.g., chronological order, cause and effect, compare/contrast) to organize information in order to draw conclusion
- Combines information and weighs evidence to draw conclusions and create meaning

**Express**

- Cites all sources used according to local style formats

**Reflect**

- Identifies and evaluates the importance of features for a good product, presentation, and engagement in the process of inquiry

**Design Thinking**

- Builds on real-world experiences to broaden perspective and open creative possibilities (e.g., field trips, makerspaces, coding, video and audio production)

**STANDARD 2: MULTIPLE LITERACIES**

- Participates in literary discussions and book clubs
- Analyzes visual text (e.g., charts, graphs, photographs, videos, timelines, maps) to gather information and draw inferences about meaning
- Determines the purpose and intended audience of a media presentation
- Uses the language of the medium (e.g., use of color, pace, perspective, visuals) and the characteristics of the technology tool to create and deliver an effective presentation

**STANDARD 3: SOCIAL AND CIVIC RESPONSIBILITY**

- Identifies and challenges misinformation and own assumptions about community issues and diverse cultures by seeking and evaluating multiple viewpoints and cultural perspectives
- Demonstrates respect for the principles of equitable access to information by curating and sharing valid and authoritative sources with classmates
- Engages effectively in collaborative discussions with diverse groups
- Checks the validity of all information and avoids the spread of misinformation on social media
- Demonstrates understanding of a digital footprint and constructs own footprint accordingly

**STANDARD 4: PERSONAL GROWTH AND AGENCY**

- Selects print and nonprint materials based on personal interests, knowledge of authors, and reading level
- Empathizes with literary characters, peers, people in the local and global community, and social issues by placing them in historical or social context [social awareness]
- Develops aspects of personal identity that are the most satisfying, identity-confirming, and culturally responsive



**STANDARD 1: INQUIRY AND DESIGN THINKING**

**Connect**

- Revises the topic as needed to arrive at a manageable topic for a given research situation

**Wonder**

- Refines questions to guide the search for different types of information (e.g., overview, big-idea, specific detail, cause and effect, comparison)

**Investigate**

**Sources**

- Uses organizational systems and electronic search strategies (key words, subject headings) to locate appropriate resources
- Uses different formats (e.g., books, Websites, subscription databases, multimedia, graphs, charts, maps and diagrams) as sources of information

**Evidence**

- Evaluates the accuracy, authority, validity, perspective, and bias of sources and information
- Reads laterally in the digital environment to discover divergent and conflicting information as well as corroborating information
- Selects high-quality information from multiple sources that answers the research questions, provides a balance of diverse perspectives, and includes both main ideas and supporting details
- Recognizes that own point of view influences the interpretation of information

**Making Sense of Information and Notetaking**

- Identifies misconceptions and revises ideas as new information is gained
- Provides evidence for logical inferences based on both the explicit and implicit meaning of text
- Employs reflective notetaking strategies to capture own thinking and inferences about the evidence being noted in words and phrases, summarized, paraphrased, or quoted

**Construct**

- Forms opinions, judgments, and claims backed up by supporting evidence and clear reasoning

**Express**

- Develops a line of argument or claim with a line of reasoning, clear supporting evidence, and attention to refuting counter arguments and claims
- Creates products for authentic reasons and audiences
- Cites all sources used according to local style formats

**Reflect**

- Reflects on own emotional and intellectual experience through the process of inquiry

**Design Thinking**

- Engages actively in a design process to use tools, resources, and materials to test the hypothesis or desired result by creating a solution or model, testing the results, modifying the model when needed, and determining the validity of the hypothesis or the quality of the model

**STANDARD 2: MULTIPLE LITERACIES**

- Participates in literary discussions, special literary programs, and book clubs
- Deconstructs media claims and arguments by looking at logical fallacies, persuasive techniques, and the use of the language of the medium (e.g., use of color, pace, perspective, narrative structure, visuals)
- Matches language of presentation with audience, purpose, complexity of the content, and intended impact

**STANDARD 3: SOCIAL AND CIVIC RESPONSIBILITY**

- Demonstrates critical evaluation strategies that are appropriate for various types of sources (e.g., authoritative websites, fringe or fake websites, blogs, tweets, viral videos)
- Listens carefully to the reasoning and ideas of others, engages in a discussion, and changes own opinion when those ideas have merit
- Works collaboratively to develop, publish, and present projects involving 1-2 media that effectively communicate information and ideas about the curriculum to authentic audiences
- Makes ethical decisions about the creation and sharing of information (e.g., respecting rights of creators, remixing, and using images and print within the guidelines of Fair Use)
- Observes Internet safety procedures, including safeguarding personal information and equipment

**STANDARD 4: PERSONAL GROWTH AND AGENCY**

- Explores opportunities to prepare for the future, including higher education, career training, vocational training
- Develops a growth mindset by identifying own strengths and preferences in terms of future career [self-awareness]
- Displays resilience by pursuing alternative decisions or actions after failing or receiving negative feedback and learning from that failure [responsible decision-making]



**STANDARD 1: INQUIRY AND DESIGN THINKING**

**Connect**

- Identifies key words, concepts, and synonyms, both stated and implied, for topic and uses them to further research
- Develops a schema or mind map to express the big idea and the relationships among supporting ideas and topics of interest
- Develops and refines the topic, problem, or question independently to arrive at a worthy and manageable topic for inquiry

**Wonder**

- Refines questions to provide a framework for the inquiry and to fulfill the purpose of the research (e.g., questions to lead to historical context and interpretation; questions to elicit accurate facts about scientific problem or issue)
- Plans inquiry to test hypothesis systematically or gather evidence to validate thesis

**Investigate**

**Sources**

- Uses the organizational features of a book as well as abstracts, tables, charts and first and last chapters to locate main ideas, specific supporting evidence, and a balanced perspective
- Uses advanced searching strategies (Boolean operators, truncation, domain and format filters, analysis of URLs, relational searching) to broaden and narrow searches and locate appropriate resources
- Evaluates the authority of a source by assessing the credentials and reputation of the author, creator or publisher, date of publication, and length or comprehensiveness

**Evidence**

- Evaluates and selects evidence from multiple sources based on relevance and usefulness to answer research questions, currency, authority, accuracy, comprehensiveness, and point of view
- Evaluates digital information for authority, credibility, accuracy, comprehensiveness, point of view, and bias
- Analyzes the impact of point of view, perspective, and purpose of the information provided by a source

**Making Sense of Information and Notetaking**

- Questions and challenges the text while reading or viewing to ensure comprehension and validation of accuracy and authority during the process of gathering information
- Takes notes using one or more of a variety of notetaking strategies including reflecting on the information (e.g., graphic organizers, two-column notes, concept maps)

**Construct**

- Organizes information independently, deciding the structure based on the relationships among ideas and general patterns discovered
- Draws clear and appropriate conclusions supported by evidence and examples

**Express**

- Creates a product and presentation to present an argument, claim, point of view, interpretation, or new model most effectively for a specific audience
- Cites all sources used according to standard style formats
- Embeds citations to specific information, visuals, or sound when appropriate

**Reflect**

- Records and reflects on individual experience of the inquiry process – the hardest part, best part, important skills learned, insights experienced, emotional highs and lows, etc.

**Design Thinking**

- Selects and uses resources and technology to investigate identified problems through active experimentation, experience, creation, and engagement
- Engages actively in a design process to use tools, resources, and materials to test the hypothesis or desired result by creating a solution or model, testing the results, modifying the solution/ model when needed, and determining the validity of the hypothesis or the quality of the model

**STANDARD 2: MULTIPLE LITERACIES**

- Shares reading experiences and responses to literature in multiple ways (e.g., face-to-face conversations, technology presentations, posters, creative products)
- Analyzes maps, pictures, charts, graphs, and other information presented visually to determine main ideas, supporting details, point of view, and both explicit and implicit meaning
- Identifies misinformation or biased information by analyzing and evaluating the motivations and creators of the false or misleading information (e.g., profit, political motives, influence, point of view, social bots)
- Retrieves and uses images, sound, and visual media according to ethical and legal standards

**STANDARD 3: SOCIAL AND CIVIC RESPONSIBILITY**

- Engages in civic online reasoning by verifying information that is presented as the truth, recognizing the impact of social-media format on information, and actively seeking multiple perspectives
- Curates and shares valuable resources with peers
- Abides by the Acceptable Use Policy in all respects
- Demonstrates netiquette behavior by respecting others; using appropriate language, images and emoticons; thinking before sending or forwarding messages; creating safe screen names; and challenging cyberbullying

**STANDARD 4: PERSONAL GROWTH AND AGENCY**

- Identifies social media contexts that are of personal interest, determines the content and “rules of engagement” for each, joins or accesses each appropriately (e.g., finding people to follow on Twitter), and uses communication strategies appropriate for each context
- Develops interpersonal skills to build trusting relationships with diverse peers and adults through collaboration and communication [relationship skills]
- Demonstrates respect and empathy for diverse people and perspectives [social awareness]
- Displays self-confidence in forming and sharing own opinion and ideas and questioning ideas that are different from or conflict with own
- Identifies an authentic problem or issue, researches and shares research information to raise awareness of the issue or the changes needed, identifies effective ways to address the issue, and collaborates to advocate or take action to implement those ideas

## STANDARD 1: INQUIRY AND DESIGN THINKING

### Connect

- Gathers context about the time period, people, and issues surrounding the topic by reading laterally across both primary and secondary sources
- Explores problems or questions for which there are multiple answers or no “best” answer

### Wonder

- Creates questions to lead to basic information and, in addition, to information that is more critical, complex, and diverse in perspectives

### Investigate

#### Sources

- Uses search-engine organizational features (e.g., algorithm determining order of results, differentiation of sponsored content, beginning text, URL) to locate web-based information to answer research questions
- Seeks information from alternative perspectives by browsing the shelves for related books, identifying people and organizations with opposing views, following links to related articles, and conducting additional searches by using key ideas and terms for alternative perspectives
- Contrasts primary and secondary sources on the topic to determine commonalities and differences in point of view, comprehensiveness, and depth of specific detail

#### Evidence

- Compares information in diverse sources to corroborate accuracy, resolve conflicting evidence, and balance perspectives
- Analyzes degrees of bias (from slightly slanted perspective to heavily slanted propaganda) and the impact of that bias
- Draws meaning from digital text by employing print literacy and inquiry skills, interpreting meaning presented through multimedia, interacting with the text, reading laterally (reading related information across multiple sites), and thinking non-linearly (using embedded links and multiple sites)

#### Making Sense of Information and Notetaking

- Challenges ideas in text and makes notes of questions to pursue in additional sources
- Reflects on notes (perhaps in a reflection column) by asking questions, recording own opinions, challenging, and noting the importance of the idea for the final product

### Construct

- Develops a line of argument or claim that incorporates and/or refutes competing interpretations or conflicting evidence with credible evidence
- Builds a conceptual framework by synthesizing ideas gathered from multiple sources
- Develops own opinion, perspective, or claim and supports with evidence and a clear line of reasoning

### Express

- Drafts the presentation/product to present the line of reasoning and evidence for an argument, claim, point of view, interpretation, or new model most effectively with supporting evidence
- Publishes final product for an authentic audience and real-world application
- Evaluates own product and process throughout the work and uses self-assessment, teacher feedback, and peer feedback to make revisions when necessary

### Reflect

- Identifies own strengths (academic, social, and emotional) and sets goals about specific ways to improve in the future

## Design Thinking

- Builds on real-world experiences to broaden perspective and open creative possibilities (e.g., field trips, makerspaces, hack-a-thons, coding camps, video production centers)
- Publishes or presents the solution/model (to an authentic audience if possible) with evidence or line of reasoning about the expected impact

## STANDARD 2: MULTIPLE LITERACIES

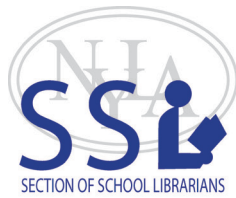
- Explores real-world genres as well as favorite genres and authors (movie reviews, editorials, consumer reports, game tips and strategies, career information)
- Interprets and evaluates visuals based on content analysis, visual analysis, contextual information, image source, and technical quality
- Uses social media (e.g., Wikipedia, Twitter, YouTube, online blogs) responsibly for the exchange of information and ideas by fact-checking the information, avoiding the spread of misinformation, engaging in interactions around fact-based information, and respecting and thoughtfully responding to the ideas of others
- Assesses and revises own products by using the criteria of clarity, accuracy, relevance, sufficiency, logic, depth, and breadth
- Delivers presentations to authentic audiences and peers with self-confidence, clarity, attention to the intended impact on the audience, and an “expert” or “professional” stance

## STANDARD 3: SOCIAL AND CIVIC RESPONSIBILITY

- Demonstrates critical evaluation strategies that are appropriate for various types of sources (e.g., authoritative websites, fringe or fake websites, opinion essays, blogs, tweets, viral videos)
- Demonstrates tolerance for different viewpoints
- Works collaboratively to design, develop, publish, and present multimedia projects that effectively communicate information and ideas about the curriculum to authentic audiences
- Demonstrates respect for copyright, fair use, creative commons, and attribution of information and images and acquires permission from creator when necessary
- Analyzes the consequences and costs of hacking, spamming, consumer fraud, virus setting, intrusion and other unethical uses of information and communication technology and identifies ways for addressing these risks

## STANDARD 4: PERSONAL GROWTH AND AGENCY

- Selects print and nonprint materials based on personal interests, knowledge of authors, reading level and aspirations for future growth and career
- Uses information and technology to address personal issues and investigate opportunities for the future, including higher education, career training, vocational training
- Develops a growth mindset [self-management]
- Demonstrates leadership and self-confidence by facilitating collaborative decision making and problem solving based on assessment of the current situation, feedback from others, and consideration of own ethical and social responsibilities [responsible decision-making]
- Displays self-confidence in own ability to take risks in learning, fail, learn from failure, and change approach, conclusions, or opinions based on new or more accurate information
- Takes a leadership role in collaborative groups and completion of group projects by fulfilling own responsibilities effectively while enabling others to contribute their best work as well



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Empire State Information Fluency Continuum Barbara K. Stripling