New York Empire State Information Fluency Continuum

# Grades 9-12

**Inquiry and Design Thinking: Use Inquiry and Design Thinking to Build Understanding and Create New Knowledge**

**Standard 1.1** **Information-fluent learners use an inquiry process to connect to prior experience and background knowledge, wonder and ask questions, investigate, construct new understanding, express learning, and reflect on the process and product of learning.**

Cn. CONNECT 9-12.IDT.1.CN

- a Background and Key Words 9-12.IDT.1.CN.A
  - 1 Identifies key words, concepts, and synonyms, both stated and implied, for topic and uses them to further research 9-12.IDT.1.CN.A.1
  - 2 Gathers context about the time period, people, and issues surrounding the topic by reading laterally across both primary and secondary sources 9-12.IDT.1.CN.A.2
- b Topic 9-12.IDT.1.CN.B
  - 1 Develops a schema or mind map to express the big idea and the relationships among supporting ideas and topics of interest 9-12.IDT.1.CN.B.1
  - 2 Develops and refines the topic, problem, or question independently to arrive at a worthy and manageable topic for inquiry 9-12.IDT.1.CN.B.2
  - 3 Explores problems or questions for which there are multiple answers or no “best” answer 9-12.IDT.1.CN.B.3

Wn. WONDER 9-12.IDT.1.WN

- a Questions and Predicted Answers 9-12.IDT.1.WN.A
  - 1 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) 9-12.IDT.1.WN.A.1
  - 2 Creates questions to lead to basic information and, in addition, to information that is more critical, complex, and diverse in perspectives 9-12.IDT.1.WN.A.2
- b Thesis and Hypothesis 9-12.IDT.1.WN.B
  - 1 Plans inquiry to test hypothesis systematically or gather evidence to validate thesis 9-12.IDT.1.WN.B.1

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In. INVESTIGATE 9-12.IDT.1.IN

a Sources 9-12.IDT.1.IN.A

1 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 9-12.IDT.1.IN.A.1

2 Uses organizational features of electronic books, databases, online articles and websites (e.g., menu bars, tabs, buttons, links, sidebars, chapter titles, headings and subheadings, abstracts, pull quotes, visuals, boxed information) to locate information to answer research questions 9-12.IDT.1.IN.A.2

3 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 9-12.IDT.1.IN.A.3

4 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 9-12.IDT.1.IN.A.4

5 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 9-12.IDT.1.IN.A.5

6 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 9-12.IDT.1.IN.A.6

7 Contrasts primary and secondary sources on the topic to determine commonalities and differences in point of view, comprehensiveness, and depth of specific detail 9-12.IDT.1.IN.A.7

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b Evidence 9-12.IDT.1.IN.B

1 Evaluates and selects evidence from multiple sources based on relevance and usefulness to answer research questions, currency, authority, accuracy, comprehensiveness, and point of view 9-12.IDT.1.IN.B.1

2 Compares information in diverse sources to corroborate accuracy, resolve conflicting evidence, and balance perspectives 9-12.IDT.1.IN.B.2

3 Evaluates digital information for authority, credibility, accuracy, comprehensiveness, point of view, and bias 9-12.IDT.1.IN.B.3

4 Analyzes the impact of point of view, perspective, and purpose on the information provided by a source 9-12.IDT.1.IN.B.4

5 Analyzes degrees of bias (from slightly slanted perspective to heavily slated propaganda) and the impact of that bias 9-12.IDT.1.IN.B.5

6 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) 9-12.IDT.1.IN.B.6

c Making Sense of Information and Notetaking 9-12.IDT.1.IN.C

1 Questions and challenges the text while reading or viewing to ensure comprehension and validation of accuracy and authority during the process of gathering information 9-12.IDT.1.IN.C.1

2 Challenges ideas in text and makes notes of questions to pursue in additional sources 9-12.IDT.1.IN.C.2

3 Takes notes using one or more of a variety of notetaking strategies including reflecting on the information (e.g., graphic organizers, twocolumn notes, concept maps) 9-12.IDT.1.IN.C.3

4 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 9-12.IDT.1.IN.C.4

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- Cs. CONSTRUCT 9-12.IDT.1.CS
  - a Organization of Gathered Information 9-12.IDT.1.CS.A
    1. Organizes information independently, deciding the structure based on the relationships among ideas and general patterns discovered 9-12.IDT.1.CS.A.1
    2. Develops a line of argument or claim that incorporates and/or refutes competing interpretations or conflicting evidence with credible evidence 9-12.IDT.1.CS.A.2
  - b Interpretations and Conclusions 9-12.IDT.1.CS.B
    1. Draws clear and appropriate conclusions supported by evidence and examples 9-12.IDT.1.CS.B.1
    2. Builds a conceptual framework by synthesizing ideas gathered from multiple sources 9-12.IDT.1.CS.B.2
    3. Develops own opinion, perspective, or claim and supports with evidence and a clear line of reasoning 9-12.IDT.1.CS.B.3
- Ex. EXPRESS 9-12.IDT.1.EX
  - a Organization for Expression 9-12.IDT.1.EX.A
    1. 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 9-12.IDT.1.EX.A.1
  - b Product and Presentation 9-12.IDT.1.EX.B
    1. Creates a product and presentation to present an argument, claim, point of view, interpretation, or new model most effectively for a specific audience 9-12.IDT.1.EX.B.1
    2. Publishes final product for an authentic audience and real-world application 9-12.IDT.1.EX.B.2
    3. Evaluates own product and process throughout the work and uses self-assessment, teacher feedback, and peer feedback to make revisions when necessary 9-12.IDT.1.EX.B.3
    4. Cites all sources used according to standard style formats 9-12.IDT.1.EX.B.4
    5. Embeds citations to specific information, visuals, or sound when appropriate 9-12.IDT.1.EX.B.5

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Re. REFLECT 9-12.IDT.1.RE

a Assessment of Learning Experience 9-12.IDT.1.RE.A

1 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. 9-12.IDT.1.RE.A.1

b Assessment of Personal Strengths 9-12.IDT.1.RE.B

1 Identifies own strengths (academic, social, and emotional) and sets goals about specific ways to improve in the future 9-12.IDT.1.RE.B.1

**Standard 1.2** **Information-fluent learners experience, experiment, and use a design process to discover creative solutions to authentic problems, form personal understandings, and propose original ideas.**

**Design Thinking** 9-12.IDT.2.A

1 **Selects and uses resources and technology to investigate identified problems through active experimentation, experience, creation, and engagement** 9-12.IDT.2.A.1

2 **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)** 9-12.IDT.2.A.2

3 **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** 9-12.IDT.2.A.3

4 **Publishes or presents the solution/model (to an authentic audience if possible) with evidence or line of reasoning about the expected impact** 9-12.IDT.2.A.4

**Multiple Literacies: Use Multiple Literacies to Explore, Learn, and Express Ideas**

**Standard 2.1** **Information-fluent learners use multimedia literacy skills and knowledge to deconstruct and learn from texts in multiple formats through comprehension, analysis, interpretation, and evaluation.**

**Standard 2.2** **Information-fluent learners present their learning and ideas by constructing messages using multiple, authentic formats appropriate for the purpose and audience.**

**Response to Literature** 9-12.ML.1.A

1 **Shares reading experiences and responses to literature in multiple ways (e.g., face-to-face conversations, technology presentations, posters, creative products)** 9-12.ML.1.A.1

2 **Explores real-world genres as well as favorite genres and authors (movie reviews, ditorials, consumer reports, game tips and strategies, career information)** 9-2.ML.1.A.2

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| **Visual Literacy** 9-12.ML.1.B | 1 | **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** 9-12.ML.1.B.1 |
| | 2 | **Interprets and evaluates visuals based on content analysis, visual analysis, contextual information, image source, and technical quality** 9-12.ML.1.B.2 |
| **Media Literacy** 9-12.ML.1.C | 1 | **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)** 9-12.ML.1.C.1 |
| | 2 | **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** 9-12.ML.1.C.2 |
| **Multiple Literacy Presentation** 9-12.ML.2.A | 1 | **Retrieves and uses images, sound, and visual media according to ethical and legal standards** 9-12.ML.2.A.1 |
| | 2 | **Assesses and revises own products by using the criteria of clarity, accuracy, relevance, sufficiency, logic, depth, and breadth** 9-12.ML.2.A.2 |
| | 3 | **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** 9-12.ML.2.A.3 |
| **Social and Civic Responsibility: Demonstrate Civic Responsibility, Respect for Diverse Perspectives, Collaboration, and Digital Citizenship** | Standard 3.1 | **Information-fluent learners recognize the importance of accurate information to a democratic society and actively seek, evaluate, learn from, and use credible information from diverse community and global perspectives.** |
| | Standard 3.2 | **Information-fluent learners demonstrate effective collaboration in the exchange of information, in both the face-to-face and digital environment.** |
| | Standard 3.3 | **Information-fluent learners demonstrate digital citizenship by maintaining ethical decision making and behavior and avoiding the spread of misinformation in the exchange and use of information.** |
| **Learning from Diverse and Credible Points of View** 9-12.SCR.1.A | 1 | **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** 9-12.SCR.1.A.1 |
| | 2 | **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)** 9-12.SCR.1.A.2 |

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| **Civic Reasoning** 9-12.SCR.1.B | 1 | **Demonstrates tolerance for different viewpoints** 9-12.SCR.1.B.1 |
| **Collaboration** 9-12.SCR.2.A | 1 | **Curates and shares valuable resources with peers** 9-12.SCR.2.A.1 |
| | 2 | **Works collaboratively to design, develop, publish, and present multimedia projects that effectively communicate information and ideas about the curriculum to authentic audiences** 9-12.SCR.2.A.2 |
| **Intellectual Property Rights** 9-12.SCR.3.A | 1 | **Demonstrates respect for copyright, fair use, creative commons, and attribution of information and images and acquires permission from creator when necessary** 9-12.SCR.3.A.1 |
| **Safe and Ethical Use of Technology** 9-12.SCR.3.B | 1 | **Abides by the Acceptable Use Policy in all respects** 9-12.SCR.3.B.1 |
| | 2 | **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** 9-12.SCR.3.B.2 |
| | 3 | **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** 9-12.SCR.3.B.3 |
| **Personal Growth and Agency: Engage in Personal Exploration, Social and Emotional Growth, Independent Reading and Learning, and Personal Agency** | Standard 4.1 | **Information-fluent learners use information and ideas presented in any format to reflect on and pursue personal interests, develop strengths, and engage in personalized and independent learning.** |
| | Standard 4.2 | **Information-fluent learners develop agency (personal identity and confidence) to express their ideas, raise awareness, advocate for change, and/or take social action.** |
| **Personal Exploration and Independent Reading and Learning** 9-12.PGA.1.A | 1 | **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** 9-12.PGA.1.A.1 |
| | 2 | **Selects print and nonprint materials based on personal interests, knowledge of authors, reading level and aspirations for future growth and career** 9-12.PGA.1.A.2 |
| | 3 | **Uses information and technology to address personal issues and investigate opportunities for the future, including higher education, career training, vocational training** 9-12.PGA.1.A.3 |

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| **Social and Emotional Growth** 9-12.PGA.1.B | 1 | **Develops interpersonal skills to build trusting relationships with diverse peers and adults through collaboration and communication [relationship skills]** 9-12.PGA.1.B.1 |
| | 2 | **Demonstrates respect and empathy for diverse people and perspectives [social awareness]** 9-12.PGA.1.B.2 |
| | 3 | **Develops a growth mindset [self-management]** 9-12.PGA.1.B.3 |
| | 4 | **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]** 9-12.PGA.1.B.4 |
| **Self-Identity and Confidence** 9-12.PGA.2.A | 1 | **Displays self-confidence in forming and sharing own opinion and ideas and questioning ideas that are different from or conflict with own** 9-12.PGA.2.A.1 |
| | 2 | **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** 9-12.PGA.2.A.2 |
| **Commitment to Act** 9-12.PGA.2.B | 1 | **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** 9-12.PGA.2.B.1 |
| | 2 | **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** 9-12.PGA.2.B.2 |