

Information Fluency: Priority Benchmark Skills and Assessments

Grade 9

STANDARDS AND INDICATORS	BENCHMARKS	ASSESSMENTS
STANDARD 1: USING INQUIRY TO BUILD UNDERSTANDING		
Inquiry Phase: Connect	9.1 Identifies key words, concepts, and synonyms, both stated and implied, for topic and uses them to further research. 9.2 Develops a schema or mind map to express the big idea and the relationships among supporting ideas and topics of interest.	9.1 Identifying Key Words, Concepts, Synonyms and Related Terms 9.2 Mind Mapping
Inquiry Phase: Wonder		
Inquiry Phase: Investigate	9.3 Takes notes using one or more of a variety of note taking strategies, including reflecting on the information (e.g., graphic organizers, two-column notes).	9.3 Notetaking Grid 9.3 Reflective Notetaking 9.3 Notetaking to Answer Questions 9.3 Notes on Main Ideas and Supporting Evidence 9.3 Notes on Main Ideas and Supporting Evidence - <i>Example</i>
Inquiry Phase: Construct	9.4 Organizes information independently, deciding the structure based on the relationships among ideas and general patterns discovered.	9.4 Organizing Information - <i>Example</i> 9.4 Organizing Information - Rubric
Inquiry Phase: Express		
Inquiry Phase: Reflect	9.5 Identifies own strengths and sets goals for improvement.	9.5 My Strengths in the Inquiry Process 9.5 My Strengths in the Inquiry Process - Example
STANDARD 2: PURSUING PERSONAL AND AESTHETIC GROWTH		
Reader/Viewer Response and Expression		
Personal Exploration		
Motivated, Independent Learning		
STANDARD 3: DEMONSTRATING SOCIAL RESPONSIBILITY		
Importance of Information to a Democratic Society		
Effective Social Interaction to Broaden Understanding		
Ethical Behavior in Use of Information		

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Identifying Key Words, Concepts, Synonyms and Related Terms

Effective researchers use a strategy of broadening their search for information by identifying key words, concepts, synonyms, and related terms. You can find these alternative search terms by consulting an **overview article** in a magazine or encyclopedia, a **thesaurus**, a **dictionary**, **search engines**, and **subject headings** in the library catalog. You should start this process as soon as you decide on a topic or research question and continue to build your list throughout your inquiry.

Key Words (Words that convey the main ideas of your topic or questions)	Concepts (Words that describe the big ideas to which your topic is related)	Synonyms (Words that mean the same as your key words)	Related Terms (Words that are closely associated with key words, but not substitutes like synonyms)
Example Topic/Question: How will global warming affect life in New York City during the 21 st century?			
Ex: global warming, climate, greenhouse gases, solar radiation	Ex: ecological system, environment	Ex: earth temperature, greenhouse effect	Ex: climate change, earth's atmosphere
Your Topic/Question:			
Key Words	Concepts	Synonyms	Related Terms

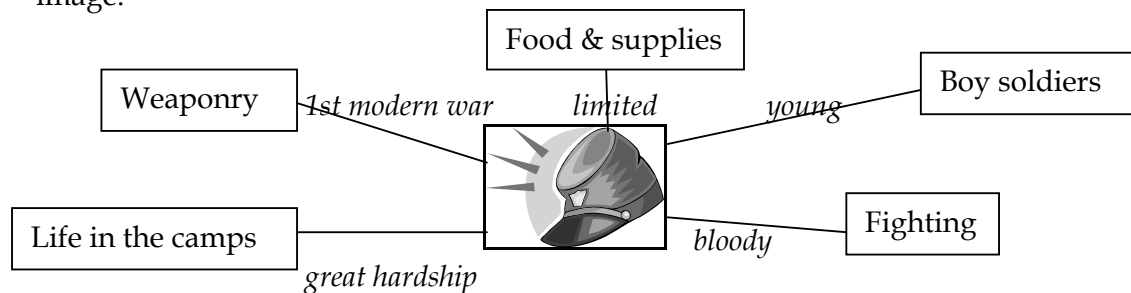
Mind Mapping

Mind Mapping is a method of creating a visual image that communicates a big idea, supporting ideas, and relationships among ideas. Researchers use mind maps to brainstorm a picture of their inquiry topic, to figure out the aspects of the topic that are most interesting or open to inquiry, and to think through definitions, examples, causes, effects, and questions.

What does a mind map look like?

A mind map has an image of the main idea in the center, with 5-10 ideas that relate to the main idea revolving around the center, but connected by lines labeled with words that express the relationship between the two ideas.

For example, a mind map of the “Life of a Soldier in the American Civil War” might have an image of a soldier’s cap in the center, with ideas like “boy soldiers,” “food and supplies,” “weaponry,” “life in the camps,” and “fighting” surrounding the center image.



Process for Creating a Mind Map

1. In the center of your paper or screen, draw a symbol or image that represents the main idea.
2. Draw branches from the main idea to 5-10 subtopics that you have gathered from prior knowledge or background information. The subtopics can be expressed as words or images.
3. Label the branch lines with descriptive words or verbs to express the relationship between the ideas.
4. You may decide to extend the mind map by brainstorming smaller topics that relate to each subtopic.
5. You can use color, different types of print or graphics, and variations in size to ensure that your main ideas and relationships are clear.
6. Be creative! This is a chance to clarify an overall picture of your inquiry topic and figure out what **you** want to research in more detail.

Try these sites for free mind mapping tools:

- <http://mywebspiration.com/>
- <http://www.mindmeister.com/>
- <http://www.mindomo.com/>

Name _____ Class _____

Notetaking Grid

Topic: _____

	Resource (Website)	Information	Vocabulary - Key Words	Paraphrase
Key Question:				
Key Question:				

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Reflective Notetaking

Question:		
Source/Pg	Notes in Own Words - Answers to Question	Reactions (Questions, Opinions, Responses, Gaps, Inaccuracies)

Name _____ Class _____

Notetaking to Answer Questions

Topic:	Key Question:	Key Question:	Key Question:
Resource:	Evidence:	Evidence:	Evidence:
Evaluation of Evidence:			

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Notes on Main Ideas and Supporting Evidence

Key Question/Topic <i>Write down your topic sentence and/or question you are attempting to find information to answer/prove</i>	Citation Information for Source <i>Write down the information you will need to write a bibliographic citation for your source</i> <i>(www.citationmachine.net)</i>	Main Idea of Source <i>What is the main idea from your source?</i> <i>How does it relate to your key question/topic?</i>	Supporting Evidence/Details <i>What evidence is offered to back up the main ideas?</i>	Notes for Followup in Other Sources <i>What questions are raised or left unanswered? What conflicts in supporting evidence did you find?</i>

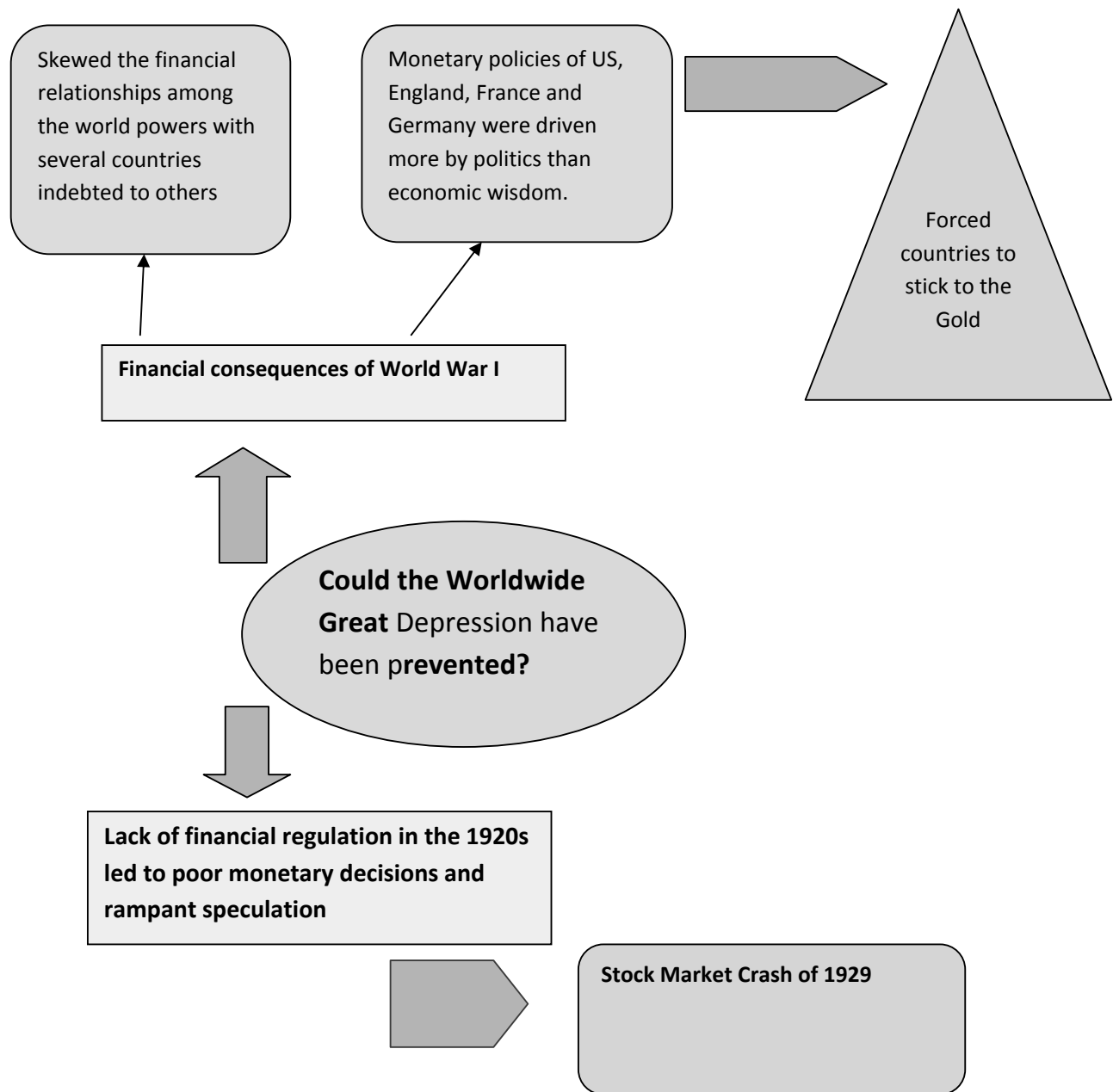
Name _____

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Notes on Main Ideas and Supporting Evidence - Example

Key Question/Topic <i>Write down your topic sentence and/or question you are attempting to find information to answer/prove</i>	Citation Information for Source <i>Write down the information you will need to write a bibliographic citation for your source</i> (www.citationmachine.net)	Main Idea of Source <i>What is the main idea from your source? How does it relate to your key question/topic?</i>	Supporting Evidence/Details <i>What evidence is offered to back up the main ideas?</i>	Notes for Followup in Other Sources <i>What questions are raised or left unanswered? What conflicts in supporting evidence did you find?</i>
Global Warming <i>Why do some people still believe the prevailing view of global warming is a myth?</i>	"Global warming labeled a 'scam'; Documentary blames the sun.(PAGE ONE)." <u>The Washington Times</u> (March 6, 2007): A01. <u>Junior Edition</u> . Gale. NYC CSD #79 Legacy HS for Integrated. 14 Nov. 2007 < http://find.galegroup.com/itx/start.do?prodId=STOJ >. Gale Document Number: CJ160176039	With a packet of claims that are almost certain to defy conventional wisdom, a television documentary to be aired in Britain this week condemns man-made global warming as a myth that has become "the biggest scam of modern times." The program titled "The Great Global Warming Scandal" and set for screening by TV Channel 4 on Thursday dismisses claims that high levels of greenhouse gases generated by human activity causes climate change. Instead, the program suggests that the sun itself is the real culprit. <i>It relates to my topic because major new sources are still reporting on the idea that global warming is a myth</i>	Channel 4 says that the program features "an impressive roll-call of experts," including nine professors, who are experts in climatology, oceanography, meteorology, biogeography and paleoclimatology. Scientists in the Channel 4 documentary cite what they claim is another discrepancy involving conventional research, saying that most of the recent global warming occurred before 1940, after which temperatures around the world fell for four decades. It also questions an assertion by the U.N. Intergovernmental Panel on Climate Change's report that it was backed by some 2,500 of the world's leading scientists.	A documentary that aired on TV in Britain claims that global warming is a "scam" and is really caused by the sun. The program claims to have evidence from renowned scientists who refute the prevailing idea that greenhouse gases are the main culprit in global warming. They point to the world getting colder after 1940 when industrialization took off and to the fact that some of the scientists the UN claims support global warming do not.

Organizing Information -- Example



Discovered Patterns: The financial costs of World War I lead to poor monetary decision worldwide based on politics and revenge rather than sound economics. At the same time, the lack of financial regulation worldwide and the decision to stick with the gold standard, lead to speculation in the US resulting in the Stock Market Crash and subsequent financial shocks around the globe.

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Organizing Information - Rubric

	4	3	2	1
Graphic organizer/Structure	Chosen structure clearly displays the main ideas and supporting evidence and firmly supports the thesis	Chosen structure displays the main ideas but lacks supporting evidence; the ideas do not prove the thesis	Chosen structure does not differentiate between main and supporting ideas and does not offer clear support for the thesis	Unclear why structure was chosen; no structure selected
Relationships among ideas	Relationships among topic ideas are clear and evident	Relationships among ideas are somewhat clear and evident	Relationships among ideas are often unclear and rarely evident	Relationships among ideas are not clear or evident
Discovered patterns among topic ideas	Patterns/trends among topic ideas are stated and apparent (e.g., cause and effect, order of importance)	One or two patterns/trends among topic ideas are stated and apparent	Patterns/trends among topic ideas are not visibly stated and apparent	No evidence of patterns/trends among topic ideas is found

Name_____ Class_____

My Strengths in the Inquiry Process

My Strengths in the Inquiry Process	My Goals for Improving My Skills
Connect: (Connecting to own interests, prior knowledge, and background knowledge)	Connect:
Wonder: (Asking questions, making predictions, forming tentative thesis)	Wonder:
Investigate: (Finding and evaluating information to answer questions)	Investigate:
Construct: (Constructing new understandings, forming opinions, drawing conclusions)	Construct:
Express: (Applying new understandings to new context; expressing new ideas to share with others)	Express:
Reflect: (Reflecting on own learning; asking new questions)	Reflect:
Other:	Other:

Name _____ Class _____

My Strengths in the Inquiry Process - Example

My Strengths in the Inquiry Process	My Goals for Improving My Skills
Connect: (Connecting to own interests, prior knowledge, and background knowledge) I am able to connect what I research to my own life experiences	Connect: I need to improve on making connections between what I am learning to prior knowledge
Wonder: (Asking questions, making predictions, forming tentative thesis) I formulate excellent essential and inquiry questions	Wonder: I can always refine and reformulate my questions to improve their quality
Investigate: (Finding and evaluating information to answer questions) I excel at using multiple sources and point-of-view in my research	Investigate: I need to work on generating good key word terms to locate the exact information I need
Construct: (Constructing new understandings, forming opinions, drawing conclusions) I see the patterns and relationships among ideas quickly	Construct: It is hard for me make decisions about what information and evidence to include and what to leave out to support my argument(s)
Express: (Applying new understandings to new context; expressing new ideas to share with others) I love using web 2.0 tools to enhance my presentations/products and engage the audience	Express: It is difficult for me to use traditional means (a research paper) to present my research and conclusions
Reflect: (Reflecting on own learning; asking new questions) I am good on reflecting on what I did well and what I need to improve	Reflect: Sometimes, my reflection does not translate into action
Other: I work well with others	Other: I need to not always take the leadership role in groups