# Information Fluency: Priority Benchmark Skills and Assessments

**Grade 10**

## STANDARDS AND INDICATORS | BENCHMARKS | ASSESSMENTS
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### STANDARD 1: USING INQUIRY TO BUILD UNDERSTANDING

**Inquiry Phase: Connect**

10.1 Develops and refines the topic, problem, or question independently to arrive at a worthy and manageable topic for inquiry.

10.1 Exploring Background Information to Refine Research Topic
10.1 Hooking to an Inquiry Topic
10.1 Connecting to a Manageable Topic

**Inquiry Phase: Wonder**

10.2 Refines questions to provide a framework for the inquiry and to fulfill the purpose of the research.

10.2 Refining Research Questions
10.2 Developing Focus Questions at Different Levels of Thought

**Inquiry Phase: Investigate**

10.3 Conducts advanced Web searches using Boolean logic and other sophisticated search functions.

10.3 Advanced Web Searching
10.3 Advanced Searching - Review

**Inquiry Phase: Construct**

10.4 Draws clear and appropriate conclusions supported by evidence and examples.

10.4 Drawing Conclusions Supported by Evidence
10.4 Drawing Conclusions from Looking at Multiple Perspectives

**Inquiry Phase: Express**

10.5 Cites all sources used according to standard style formats.

10.5 Bibliography Worksheet
10.5 Sample Bibliography Entries – MLA Style

**Inquiry Phase: Reflect**

10.6 Records individual experience of the inquiry process – the hardest part, best part, skills learned, insights experienced, etc. with suggestions for future improvements.

10.6 Individual Experience of Inquiry

### 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
Exploring Background Information to Refine Research Topic

By reading background information, you will be able to learn enough about your topic to figure out what is most interesting for you to research. Not all sources offer general background, summary information.

To select a source that provides general background knowledge and evaluate its usefulness, use the following checklist:

<table>
<thead>
<tr>
<th>Source Information:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Criteria</strong></td>
</tr>
</tbody>
</table>
| Overview, summary information | • Focused on big idea, not specific examples  
• General encyclopedia article  
• Summary statements | |
| Attention to many aspects of topic | • Table of contents  
• Headings  
• Navigation bar | |
| Accurate, credible, up-to-date information | • Author or publisher has authority and can be believed  
• Copyright date is current enough for the topic  
• Information seems to match what is previously known and evidence supports its accuracy | |

What prior knowledge does this source confirm? What new ideas were learned?

Main ideas I knew before that were confirmed:

New ideas I discovered:

What did you discover that interests you to pursue through further inquiry?
Hooking to an Inquiry Topic

Emotional Hook:

I can relate to this topic because...

I have a personal connection to this topic because...

I feel that ________________ is ________________ and I want to do something to change it by ________________ (advocacy approach)

I will seek out reference/secondary sources to provide me with the context and larger issues of the topic. Then, I will locate primary sources (family interviews, images, video, letters, emails, audio/podcasts, music, quotations, write from my own experience, etc.) to bolster the evidence and provide emotional context for my viewpoint/argument/thesis.

Intellectual/Cerebral Hook:

This topic reminds me/is similar to ________________ that I found interesting because ________________

I am curious about ________________ and ________________

I will seek out background information from a variety of sources to gain context for further exploration and increase my understanding of the topic in order to gather credible evidence to support my thesis, present multiple viewpoints/arguments, and demonstrate my own learning growth.

Problem-Solving Hook:

How does...?

Why can’t...?

What will happen if...?

I will gather facts to comprehend all facets of the topic and to consider flaws in my hypothesis. Then, I will brainstorm as many ideas/alternative scenarios to compare and contrast their strengths and weaknesses to then find a credible solution(s) to the essential question.
Connecting to a Manageable Topic

What is my topic now?

Personal Connection
- I have a personal connection to the topic
- This topic reminds me / is similar to another topic I enjoyed reading about / researching

Background Information
- I am going to interview family or friends about the event / topic; write from my own experience; take the point-of-view of someone who was affected by this event / topic
- I will look in a book and / or encyclopedia to obtain background information on the topic to evaluate whether there is enough information, too much, or just the right amount to pursue research

Connection to Intriguing Idea
- I am going to use background information to get context about the topic and to find issues that I want to know more about
- I will figure out my own point of view and look for sources that confront that point of view as well as sources that reinforce my perspective

Questions:

Narrowing to a Manageable Topic
What aspect of topic most interests me?

What is discussed in the background information that I want to learn more about?

What aspect of the topic will allow me to draw my own conclusions, form my own opinions based on the evidence, and apply ideas to new situations?

What is my new topic?
Refining Research Questions

Topic:

List 3-5 research questions for your topic:

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- 
- 
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- 

Use the checklist below to evaluate your range of questions. Do your questions as a group satisfy the following criteria?

<table>
<thead>
<tr>
<th>CRITERIA FOR GOOD RESEARCH QUESTIONS:</th>
<th>YES</th>
<th>NO</th>
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<tbody>
<tr>
<td>Narrow and <strong>specific</strong> enough to be explored thoroughly for this assignment. [ex: What was the role of the French Underground during World War II?]</td>
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<tr>
<td>Deep enough that you will need multiple sources to answer them. [ex: What is the impact of cyberbullying on society?]</td>
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<tr>
<td>Complex enough that they require multiple points of view. [ex: How do attitudes toward gun control influence public policy?]</td>
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<tr>
<td>Balanced between fact and interpretation – questions require factual evidence and yet offer the opportunity for interpreting the evidence, forming opinions, and drawing conclusions. [ex: Why should we care about global warming?]</td>
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<td></td>
</tr>
<tr>
<td>Structured around different levels of thought (not only who, what, when, where questions, but also how, why, what caused, and what if questions). [What were the circumstances surrounding the Emancipation Proclamation? How did the Emancipation Proclamation affect the country and people of the time?]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Varied enough to elicit the richness of the topic. [ex: Questions that ask causes, effects, recommendations, solutions, points of view]</td>
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<td></td>
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</tbody>
</table>

Revise your questions so that your group of questions together satisfies each of the criteria.

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Empire State Information Skills Benchmarks
## Developing Focus Questions at Different Levels of Thought

**Topic:**

**Essential Question:**

<table>
<thead>
<tr>
<th>LEVEL OF THOUGHT</th>
<th>QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge: Recalling facts, terms, basic concepts and answers</td>
<td></td>
</tr>
<tr>
<td>Comprehension: Understanding facts and ideas</td>
<td></td>
</tr>
<tr>
<td>Application: Applying acquired knowledge, facts, techniques and rules in a different way</td>
<td></td>
</tr>
<tr>
<td>Analysis: Examining and breaking information into parts; making inferences</td>
<td></td>
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<tr>
<td>Synthesis: Combining elements in a new pattern or proposing alternate solutions</td>
<td></td>
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<tr>
<td>Evaluation: Making judgments about information, validity of ideas or quality of work</td>
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</tbody>
</table>
Advanced Web Searching

What is your research topic or question? ______________________________________________
__________________________________________________________________________________

What are the key words or phrases? _______________________  _________________________
Related Words? ______________ _______________  _________________

Boolean: This search strategy involves using more than one term to narrow or expand your result and combining the terms with Boolean operators (AND, OR, and NOT). Go to this site for an introduction: http://lib.colostate.edu/tutorials/boolean.html

AND: Limits Search
Most of the time, you will want to limit your results to make them more manageable and of higher quality. By adding AND (or using + in some search engines) between terms, you are limiting your search to only those items described by all the terms you list. Some search engines (e.g., Google) use an implied AND, so that they automatically search for the combination of the words you enter in a string.

Type in your key terms and write down the number of results. ________

Now, add other search terms to make your search more specific. (e.g., Amazon rainforest destruction rate). Write down the number of results. ________

What search string did you type in? ________________________________________________

Why is there a difference? ______________________

OR: Expands Search
If you have a very specific keyword, you may not be getting enough results or the type of information that you want. Sometimes, it is better to increase the range of your results by adding OR between terms.

Type in your key terms and write down the number of results. ________

Now, type in OR and add another search term (e.g., death penalty OR capital punishment). Write down the number of results. ________________

What did you type in? _____________________

Why is there a difference? ________________________________
Advanced Searching - Review

Advanced searching involves using more than one term to narrow or expand your results.

1. **AND**

   Using **and** between terms (pollution **AND** air):
   - □ Gives you more results
   - □ Gives you fewer results
   - □ Has no effect

   Why?

2. **OR**

   Using **or** between terms (pollution **OR** smog):
   - □ Gives you more results
   - □ Gives you fewer results
   - □ Has no effect

   Why?

3. **EXACT PHRASE**

   What does putting quotations around your phrase/sentence do (**“economic crisis”**)?
   - □ Your results must have those terms in them somewhere
   - □ You will increase your results
   - □ The terms need to be found together at all times in the same order

   Why is this helpful? ________________

4. **NOT/Excluding terms**

   Why is using **not** between terms helpful to your search?
   - □ It gives you more results
   - □ It eliminates words that might interfere with your search
   - □ It gives you results from higher-quality sources

YOUR TURN

What is your topic?

List the title of one good source you found.

What did you type in to find the source (the exact string)?

Why did you structure your search in that way?
Drawing Conclusions Supported by Evidence

Conclusion

Evidence

Examples

Conclusion

Evidence

Examples
DRAWING CONCLUSIONS FROM LOOKING AT MULTIPLE PERSPECTIVES

Question or Issue: ________________________________________________________________

INTERPRETATION FROM PERSPECTIVE OF ____________________ INTERPRETATION FROM PERSPECTIVE OF ____________________

Facts Added from this Perspective (Source, Page)  Facts Added from this Perspective (Source, Page)

UNDISPUTED FACTS (Source, Page)

Opinions (Source, Page)  Opinions (Source, Page)

YOUR INTERPRETATION AND CONCLUSIONS
### Bibliography Worksheet

To generate a bibliography, capture the following information for different types of sources. Then you may use a free online citation generator to format the bibliographic entry (for example, [www.easybib.com](http://www.easybib.com); [www.bibme.org](http://www.bibme.org); or [www.workscited4u.com](http://www.workscited4u.com)).

#### Book (one author)

<table>
<thead>
<tr>
<th>Author’s Last Name, First Name</th>
<th>Title of Book</th>
<th>City of Publication</th>
<th>Publisher</th>
<th>Copyright Year</th>
</tr>
</thead>
</table>

#### Magazine Article

<table>
<thead>
<tr>
<th>Author’s Last Name, First Name</th>
<th>Title of Article</th>
<th>Name of Magazine</th>
<th>Volume and Issue of Magazine</th>
<th>Date of Magazine</th>
<th>Page Numbers</th>
<th>URL (if online)</th>
<th>Retrieval Date (if online)</th>
</tr>
</thead>
</table>

#### Encyclopedia Article

<table>
<thead>
<tr>
<th>Author’s Last Name, First Name</th>
<th>Title of Article</th>
<th>Name of Encyclopedia</th>
<th>Editor of Encyclopedia (if available)</th>
<th>Volume, Pages</th>
<th>City of Publication</th>
<th>Publisher</th>
<th>Copyright Year</th>
</tr>
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</table>

#### Website

<table>
<thead>
<tr>
<th>Author’s Last Name, First Name</th>
<th>Title of Web page</th>
<th>Title of Website (if different)</th>
<th>Publisher of Website</th>
<th>URL</th>
<th>Last Updated Date</th>
<th>Retrieval Date</th>
</tr>
</thead>
</table>
Sample Bibliography Entries – MLA Style

Book

Website

Database

Online Encyclopedia (Grolier)

Digital Image

Blog

Video

Citation Websites:
http://citationmachine.net/
http://www.easybib.com/
http://www.noodletools.com/
http://www.bibme.org/
http://library.duke.edu/research/citing/index.html
http://www.scripps.ohiou.edu/pwestfall/info/xtras/primer.html
**Individual Experience of Inquiry**

**Stages of the Inquiry Cycle:**

- **Connect:** Connecting to own interests, prior knowledge, and background knowledge
- **Wonder:** Asking questions, making predictions, forming tentative thesis
- **Investigate:** Finding and evaluating information to answer questions
- **Construct:** Constructing new understandings, forming opinions, drawing conclusions
- **Express:** Applying new understandings to new context; expressing new ideas to others
- **Reflect:** Reflecting on own learning; asking new questions

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