

## Alignment of Taxonomies

Bloom's Taxonomy of Cognitive Domain	Bloom's Taxonomy Cognitive Domain Revised	Cognitive Demand Mathematics	Cognitive Demand English Language Arts	Webb's Depth of Knowledge
Knowledge	Remembering	<b>Level One</b> Memorize Facts, Definitions & Formulas	<b>Level One</b> Memorize, Recall	<b>Level One</b> Recall and Reproduction
Comprehension	Understanding	<b>Level Two</b> Perform Procedures	<b>Level Two</b> Perform Procedures, Explain	<b>Level Two</b> Skills and Concepts
Application	Applying	<b>Level Three</b> Demonstrate Understanding of Mathematics	<b>Level Three</b> Generate, Create, Demonstrate	
Analysis	Analyzing	<b>Level Four</b> Conjecture, Analyze, Generalize, Prove	<b>Level Four</b> Analyze, Investigate	<b>Level Three</b> Strategic Thinking
Synthesis	Evaluating	<b>Level Five</b> Solve Non-Routine Problems, Make Connections	<b>Level Five</b> Evaluate, Integrate	<b>Level Four</b> Extended Thinking
Evaluation	Creating			

# Bloom's Critical Thinking Cue Questions

## Description

Cue questions related to the six thinking skills in Bloom's Taxonomy are purposely constructed to ensure students are stimulated to respond at all levels of the cognitive domain, especially the higher levels. Students may be asked to respond through quick writes, learning logs, tests, creative writing that answers the six levels of prompts, role-audience-format-topic (RAFT) activities, or other writing or speaking activities.

## Purpose

Use *before*, *during*, and *after* reading to:

- Establish a purpose for reading
- Help students develop their thinking skills at all levels of cognition
- Ensure learning assignments respond to all levels of cognition
- Deepen student comprehension of text, especially at the higher levels
- Stimulate original thinking through the use of open-ended questions
- Provide an array of questions to support differentiation in students' products to demonstrate what they have learned

## Directions

1. Assess the cognitive demands of the reading assignment to determine which of the six levels of thinking are required for students to understand what they are reading.
2. Explicitly teach the students about Bloom's Taxonomy of Critical Thinking and share a copy of the cue questions with them.
3. Use the cue questions to develop discussion or writing prompts in advance about the text and give the prompts to students before they read, to provide a purpose for engaging with the text.
4. Model how to respond to Bloom's thinking levels through think-alouds, whole group discussions, small group discussions, paired answers, and other methods so students learn how to answer cue questions at the six levels.
5. Once students are comfortable with the six levels of thinking skills, assign independent after-reading tasks using cue questions from the chart.

## Extensions

- Provide choice for student responses by offering several cue questions from which they select one to answer for each of the six levels.
- Have students use the cue questions chart when previewing text before they read to set their own purposes for reading.
- Ask students to construct questions and answers about what they have read, using the cue questions on the chart.

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### Cross Content Sample

<p><b>English Language Arts</b></p> <p><i>During and after</i> reading a classical novel with complex plot, characterization, and theme</p> <p>During reading, provide Bloom's cue questions for students to respond at all cognitive levels: knowledge, comprehension, application, analysis, evaluation, synthesis.</p> <p>After reading, provide the chart of cue questions for each of Bloom's six thinking levels and have students select and answer at least one question for each thinking level to communicate their learning.</p>	<p><b>Mathematics</b></p> <p><i>Before and after</i> reading a text chapter on measurements</p> <p>Before reading, have students activate prior knowledge and predict what will be learned "up" the six levels of Bloom's Critical Thinking Taxonomy by answering six one-minute Quick Write prompts created by the teacher from the cue question chart that relate to precision, accuracy, and units of measurement.</p> <p>After reading, have students review and revise the predictive responses to the Bloom's cue questions to check their understanding of how precision, accuracy, and measurement units affect mathematical predictions and estimates.</p>
<p><b>Science</b></p> <p><i>During</i> reading a text chapter, reviewing graphic depictions, and viewing a video on plate tectonics</p> <p>Structure a two-column note taking chart with prompts derived from Bloom's cue questions chart that require students to analyze, evaluate, and synthesize the information on plate tectonics and correlate it to geological features in today's world.</p>	<p><b>Social Studies</b></p> <p><i>Before, during, and after</i> reading editorials about the economic systems in several countries</p> <p>Have the students refer to Bloom's cue questions for the analysis, evaluation, and synthesis levels when writing a persuasive essay about the country with the most effective economic system. Show them how to justify their response by analytical comparisons, evaluative judgments about quality, and a synthesizing description about the ways other countries would benefit from adopting the selected economic system.</p>

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## Cue Questions Based on Blooms' Taxonomy of Critical Thinking

### Lower-Order Thinking Skills

### Higher-Order Thinking Skills

<p><b>1. REMEMBERING</b></p> <ul style="list-style-type: none"> <li>• What is ?</li> <li>• How is ?</li> <li>• Where is ?</li> <li>• When did _____ happen?</li> <li>• How did _____ happen?</li> <li>• How would you explain ?</li> <li>• How would you describe ?</li> <li>• What do you recall ?</li> <li>• How would you show ?</li> <li>• Who (what) were the main ?</li> <li>• What are three ?</li> <li>• What is the definition of...?</li> </ul>	<p><b>4. ANALYZING</b></p> <ul style="list-style-type: none"> <li>• What are the parts or features of ?</li> <li>• How is _____ related to ?</li> <li>• Why do you think ?</li> <li>• What is the theme ?</li> <li>• What motive is there ?</li> <li>• What conclusions can you draw ?</li> <li>• How would you classify ?</li> <li>• How can you identify the different parts ?</li> <li>• What evidence can you find ?</li> <li>• What is the relationship between ?</li> <li>• How can you make a distinction between ?</li> <li>• What is the function of ?</li> <li>• What ideas justify ?</li> </ul>
<p><b>2. UNDERSTANDING</b></p> <ul style="list-style-type: none"> <li>• How would you classify the type of ?</li> <li>• How would you compare ? contrast ?</li> <li>• How would you rephrase the meaning ?</li> <li>• What facts or ideas show ?</li> <li>• What is the main idea of ?</li> <li>• Which statements support ?</li> <li>• How can you explain what is meant ?</li> <li>• What can you say about ?</li> <li>• Which is the best answer ?</li> <li>• How would you summarize ?</li> </ul>	<p><b>5. EVALUATING</b></p> <ul style="list-style-type: none"> <li>• Why do you agree with the actions? The outcomes?</li> <li>• What is your opinion of ?</li> <li>• How would you prove ? disprove ?</li> <li>• How can you assess the value or importance of ?</li> <li>• What would you recommend ?</li> <li>• How would you rate or evaluate the ?</li> <li>• What choice would you have made ?</li> <li>• How would you prioritize ?</li> <li>• What details would you use to support the view ?</li> <li>• Why was it better than ?</li> </ul>
<p><b>3. APPLYING</b></p> <ul style="list-style-type: none"> <li>• How would you use ?</li> <li>• What examples can you find to ?</li> <li>• How would you solve _____ using what you have learned ?</li> <li>• How would you organize _____ to show ?</li> <li>• How would you show your understanding of ?</li> <li>• What approach would you use to ?</li> <li>• How would you apply what you learned to develop ?</li> <li>• What other way would you plan to ?</li> <li>• What would result if ?</li> <li>• How can you make use of the facts to ?</li> <li>• What elements would you choose to change ?</li> <li>• What facts would you select to show ?</li> <li>• What questions would you ask in an interview with ?</li> </ul>	<p><b>6. CREATING</b></p> <ul style="list-style-type: none"> <li>• What changes would you make to solve ?</li> <li>• How would you improve ?</li> <li>• What would happen if ?</li> <li>• How can you elaborate on the reason ?</li> <li>• What alternative can you propose ?</li> <li>• How can you invent ?</li> <li>• How would you adapt _____ to create a different ?</li> <li>• How could you change (modify) the plot (plan) ?</li> <li>• What could be done to minimize (maximize) ?</li> <li>• What way would you design ?</li> <li>• What could be combined to improve (change) ?</li> <li>• How would you test or formulate a theory for ?</li> <li>• What would you predict as the outcome of ...?</li> <li>• How can a model be constructed that would change ?</li> <li>• What is an original way for the ?</li> </ul>

## Bloom's Critical Thinking Cue Questions

		<i>Actions</i>	<i>Products</i>
<b>Higher-order thinking</b>	<b><u>Creating</u></b>  (Putting together ideas or elements to develop an original idea or engage in creative thinking).	Designing Constructing Planning Producing Inventing Devising Making	Film Story Project Plan New game Song Media product Advertisement Painting
	<b><u>Evaluating</u></b>  (Judging the value of ideas, materials and methods by developing and applying standards and criteria).	Checking Hypothesising Critiquing Experimenting Judging Testing Detecting Monitoring	Debate Panel Report Evaluation Investigation Verdict Conclusion Persuasive speech
	<b><u>Analyzing</u></b>  (Breaking information down into its component elements).	Comparing Organising Deconstructing Attributing Outlining Structuring Integrating	Survey Database Mobile Abstract Report Graph Spreadsheet Checklist Chart Outline
<b>Lower-order thinking</b>	<b><u>Applying</u></b>  (Using strategies, concepts, principles and theories in new situations).	Implementing Carrying out Using Executing	Illustration Simulation Sculpture Demonstration Presentation Interview Performance Diary Journal
	<b><u>Understanding</u></b>  (Understanding of given information).	Interpreting Exemplifying Summarising Inferring Paraphrasing Classifying Comparing Explaining	Recitation Summary Collection Explanation Show and tell Example Quiz List Label Outline
	<b><u>Remembering</u></b>  (Recall or recognition of specific information).	Recognizing Listing Describing Identifying Retrieving Naming Locating Finding	Quiz Definition Fact Worksheet Test Label List Workbook Reproduction