

Key Cognitive Strategies: Learn to Think Well

The Key Cognitive Strategies are the intentional behaviors that allow students to learn, understand, retain, use, and apply content from various disciplines. Together they allow students to *think well*. The five Key Cognitive Strategies are problem formulation, research, interpretation, communication, and precision and accuracy.

Component	Element	To succeed in college and/or the workplace, high school students need to be able to do the following:
Problem Formulation	<i>Hypothesize</i>	Construct thoughtful hypotheses that contain a cause-and-effect or thesis statement, are sufficient to formulate a potential solution, make sense, and are complete.
	<i>Strategize</i>	Utilize strategies that are appropriate to the subject area and will likely be effective for solving the problem.
Research	<i>Identify</i>	Utilize search methods geared to the problem that identify sources related to the problem that are sufficient to address the hypothesis or thesis.
	<i>Collect</i>	Collect sources systematically and ensure that the sources collected are sufficient to address the hypothesis or thesis.
Interpretation	<i>Analyze</i>	Identify and utilize analytic methods that are appropriate to the problem, are sufficiently systematic to reveal patterns in the data or information, and generally help support or call into question the hypothesis or thesis.
	<i>Evaluate</i>	Select findings that are of value to completing the task, are prioritized in a way that is useful to addressing the hypothesis or thesis, and are sufficient to help support or call into question the hypothesis or thesis.
Communication	<i>Organize</i>	Produce final work products that use a logically consistent organizational structure, formats, and conventions that are appropriate to the subject area.
	<i>Construct</i>	Produce work drafts that are of increasing quality, incorporate feedback, and incorporate results from Problem Formulation, Research, and Interpretation.
Precision & Accuracy	<i>Monitor</i>	Generate final work products that are precise and follow the subject area's rules and conventions, and document references properly.
	<i>Confirm</i>	Confirm technical and grammatical accuracy and consistency with task requirements and directions.

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Component	Kindergarten & First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade	Sixth Grade	Seventh Grade	Eighth Grade	
<i>Problem Formulation</i> (Hypothesize, Strategize)	Child will think through and attempt to solve simple problems	Child will think through, devise a strategy, and attempt to solve more complex problems					Child hypothesizes and strategizes potential subject area solutions that will likely be effective to solve the problem		
<i>Research</i> (Identify, Collect)	Child can think of a place or item to help solve problems	Child can think of a person, place or item to help solve problems		Child systematically collects sources that address problems					
<i>Interpretation</i> (Analyze, Evaluate)				Child selects and prioritizes resources that are of value to completing a task.					
<i>Communication</i> (Organize, Construct)		Child will produce drafts that incorporate facts and is based on the task to be completed							
<i>Precision & Accuracy</i> (Monitor, Confirm)	Child is producing work that is increasing in quality as the year progresses			Child is producing work that is increasing in quality as the year progresses. Child confirms accuracy of work produced.					