

How Cognitive Skills Relate to **Kansas** Curriculum Standards



Reading:

Cognitive Skill	Application to KCS Questions	BrainWare Safari Exercises Developing the Skill
<p><i>Sustained Attention</i> – the ability to stay on task for a sustained period of time.</p>	<p>Reading a passage for comprehension requires sustained attention. If attention is not sustained, parts of the passage may not be processed or understood.</p>	<p>Most BrainWare Safari exercises work on sustained attention, including <i>Iguana Lookout, Jungle Labyrinth, Rhythm Ribbet, and Slithering Symbols.</i></p>
<p><i>Visual Sequential Memory</i> – the ability to recall a sequence of bits of information in the same order as originally received.</p>	<p>The student is able to recall the order of “main ideas or events as well as supporting details in appropriate level narrative, expository, and technical texts.”</p>	<p><i>Arrow Point Bridge, Bear Shuffle, Rhythm Ribbet and Slithering Symbols</i> are exercises that work on visual sequential memory.</p>
<p><i>Conceptual Thinking</i> – the ability to recognize a collection of features that go together to create an idea or category of ideas.</p>	<p>The student “utilizes graphic organizers such as mind map, venn diagram, word storm, word sort, list/group/label.”</p>	<p><i>Ancient Logic and Reasoning</i> and <i>Llama Logic</i> help develop conceptual thinking skills.</p>

There are many cognitive skills involved in learning as well as being tested on what one has learned. This document provides examples of how the Kansas State Assessment places demands on cognitive skills. This is not meant to provide a complete perspective on cognitive skills or a thorough analysis of the Kansas State Assessment. These are simply examples for illustration. BrainWare Safari is a product of Learning Enhancement Corporation. It is a comprehensive program that develops 41 cognitive skills in a fun and entertaining video game format. For more information, contact Learning Enhancement Corporation at www.BrainWareforYou.com or 877-BRAIN-10 (877-272-4610). Examples taken from Kansas Department of Education Curriculum Standards (Math and Reading) for grade 4 and Assessable Indicators from KSDE Education Standards (Science) for grade 4.

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Mathematics:

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<p>Visualization – the ability to recall an image of what has been seen and to mentally manipulate and change aspects of that image in the mind.</p>	<p>The student generates “patterns of geometric shapes including one or two attributes changes...when the next shape has one more side; or when both color and shape change at the same time.”</p>	<p>Most BrainWare Safari exercises develop visualization skills. Such exercises include Cave Comparisons, Piranha Pass, Web Weaving, and Whispering Waterfall.</p>
<p>Oculomotor – the ability to use the eyes efficiently to read and gather information from the environment.</p>	<p>The student solves “problems that involve distance and location using coordinate planes and map grids. E.g., identifying locations and giving and following directions to move from one location to another.”</p>	<p>Iguana Lookout, Jungle Labyrinth, Piranha Pass, Sky Scanning and Turtle Recall address oculomotor skills.</p>
<p>Working Memory – the ability to hold information in the mind while performing a mental operation on it.</p>	<p>A sample question such as, “At the movies, you bought popcorn for \$2.35, a soda for \$2.50, and paid \$4.50 for the ticket. Is it reasonable to say you spent \$10 dollars?”</p>	<p>Bear Shuffle, Cave Comparisons, Memory Mountain and Tree Tic-Tac-Toe are among the exercises that improve working memory skills.</p>

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Science:

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Visual Discrimination – the ability to distinguish differences.	“A student observes a rock in the sand on the playground. Which properties best describe the rock?”	BrainWare Safari exercises that develop visual discrimination include Cave Comparisons , Jumping Jaguar Flash , Sky Scanning and Volcanic Patterns .
Reasoning – the ability to form concepts and solve problems using unfamiliar information.	A sample question which asks, “Will the size of the opening of a container change the rate of evaporation of liquids?”	Ancient Logic and Reasoning and Piranha Pass are two of the exercises that develop reasoning skills.
Logic – the ability to reason and think rationally and analytically.	A question which states, “The student plans and conducts a simple investigation. She gathered her materials. What would her next step be?”	Llama Logic and Tree Tic-Tac-Toe are two of the exercises that develop logic skills.

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