

How Cognitive Skills Relate to **Minnesota** Comprehensive Assessment Questions



Reading:

Cognitive Skill	Application to MCA Questions	BrainWare Safari Exercises Developing the Skill
<p>Sustained Attention – 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</i>, <i>Jungle Labyrinth</i>, <i>Rhythm Ribbet</i>, and <i>Slithering Symbols</i>.</p>
<p>Visual Sequential Memory – the ability to recall a sequence of bits of information in the same order as originally received.</p>	<p>“What did Denise find right before she left Grandma’s house?”</p>	<p><i>Arrow Point Bridge</i>, <i>Bear Shuffle</i>, <i>Rhythm Ribbet</i> and <i>Slithering Symbols</i> are exercises that work on visual sequential memory.</p>
<p>Conceptual Thinking – the ability to recognize a collection of features that go together to create an idea or category of ideas.</p>	<p>“The author’s purpose for writing this story is probably to—?”</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 Minnesota Comprehensive Assessment places demands on cognitive skills. This is not meant to provide a complete perspective on cognitive skills or a thorough analysis of the MCA. 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 Minnesota Department of Education released and sample items, grades 4-5.

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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>Shown a series of figures, a question which asks, “Which figure is next in the pattern?”</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>Shown a picture-graph and given a series of numerical graphs, “Paul surveyed his classmates to find out the number of pets that each student owned. Which table shows the same information?”</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>“Last year a basketball player scored 513 points. This year he has scored 466 points. How many more points must he score to have the same total score as last year?”</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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<p>Visual Discrimination – the ability to distinguish differences.</p>	<p>Shown a picture of a duck, “Choose two different adaptations that make this duck more suited to feed on water plants than other kinds of birds.”</p>	<p>BrainWare Safari exercises that develop visual discrimination include Cave Comparisons, Jumping Jaguar Flash, Sky Scanning and Volcanic Patterns.</p>
<p>Reasoning – the ability to form concepts and solve problems using unfamiliar information.</p>	<p>After reading a passage on farming, a question which asks, “What should a farmer do to prevent too much fertilizer being put on a field?”</p>	<p>Ancient Logic and Reasoning and Piranha Pass are two of the exercises that develop reasoning skills.</p>
<p>Logic – the ability to reason and think rationally and analytically.</p>	<p>Shown the first few steps to an experiment, a question which asks, “What will happen to the milk when it gets cold?”</p>	<p>Llama Logic and Tree Tic-Tac-Toe are two of the exercises that develop logic skills.</p>

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