

How Cognitive Skills Relate to **New York** English Language Arts and Science Questions



Reading:

Cognitive Skill	Application to ELA and Science 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>After reading a short passage, “What happens right after Jimmy tries to fit through the fence?”</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>“Which of these statements best summarizes what Mario learns at the end of the passage?”</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 ELA and Science tests place demands on cognitive skills. This is not meant to provide a complete perspective on cognitive skills or a thorough analysis of the ELA or Science Test. 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 NYSED released test materials and sample tests grades 4 and 5 (Reading / Mathematics) and grade 4 (Science).

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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 shapes, “If the pattern below continues, how many small squares will be in figure 5?”</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 pictures of various coins, “Circle the coins to represent each decimal listed below.”</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>“Zachary is thinking of two numbers whose sum is 9. Their product is 20. The difference of the two numbers is 1. What are the two numbers?”</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 sprouting potato (which has now grown roots), “The diagram below shows a potato plant in a cup. The cup was originally filled to the top with water. Which statement best explains why the cup no longer contains water?”</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>“Which color fur will best protect a rabbit from a hawk in a snowy 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>“In order to survive, all animals need—?”</p>	<p>Llama Logic and Tree Tic-Tac-Toe are two of the exercises that develop logic skills.</p>

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