

## How Cognitive Skills Relate to Nebraska K-12 Standards



### Reading:

Cognitive Skill	Application to Nebraska Standards	BrainWare Safari Exercises Developing the Skill
<p><b><i>Sustained Attention</i></b> – 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 <b><i>Iguana Lookout</i></b>, <b><i>Jungle Labyrinth</i></b>, <b><i>Rhythm Ribbet</i></b>, and <b><i>Slithering Symbols</i></b>.</p>
<p><b><i>Visual Sequential Memory</i></b> – the ability to recall a sequence of bits of information in the same order as originally received.</p>	<p>After reading a passage, a question which asks students to “retell selections in an orderly way.”</p>	<p><b><i>Arrow Point Bridge</i></b>, <b><i>Bear Shuffle</i></b>, <b><i>Rhythm Ribbet</i></b> and <b><i>Slithering Symbols</i></b> are exercises that work on visual sequential memory.</p>
<p><b><i>Conceptual Thinking</i></b> – the ability to recognize a collection of features that go together to create an idea or category of ideas.</p>	<p>After reading multiple passages, a question in which students must “identify similarities in characters and events across stories.”</p>	<p><b><i>Ancient Logic and Reasoning</i></b> and <b><i>Llama Logic</i></b> 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 Nebraska Reading, Math, and Science standards place demands on cognitive skills. This is not meant to provide a complete perspective on cognitive skills or a thorough analysis of the Nebraska Standards. 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](http://www.BrainWareforYou.com) or 877-BRAIN-10 (877-272-4610). Examples taken from Nebraska Department of Education Standards materials grades 4 (Reading, Math) and grades 5-8 (Science).

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### Mathematics:

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<p><b>Visualization</b> – 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>A question which asks students to identify the result of “simple transformations” such as flips and rotations of a given figure.</p>	<p>Most BrainWare Safari exercises develop visualization skills. Such exercises include <b>Cave Comparisons, Piranha Pass, Web Weaving, and Whispering Waterfall.</b></p>
<p><b>Oculomotor</b> – the ability to use the eyes efficiently to read and gather information from the environment.</p>	<p>A question which asks students to “use pictographs and interpret the displayed data.”</p>	<p><b>Iguana Lookout, Jungle Labyrinth, Piranha Pass, Sky Scanning</b> and <b>Turtle Recall</b> address oculomotor skills.</p>
<p><b>Working Memory</b> – the ability to hold information in the mind while performing a mental operation on it.</p>	<p>A question which asks students to “make the correct change” when given the details of a purchase.</p>	<p><b>Bear Shuffle, Cave Comparisons, Memory Mountain</b> and <b>Tree Tic-Tac-Toe</b> are among the exercises that improve working memory skills.</p>

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### Science:

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<p><b>Visual Discrimination</b> – the ability to distinguish differences.</p>	<p>A question which asks students to read and “interpret data in line plots, tables, charts, and graphs.”</p>	<p>BrainWare Safari exercises that develop visual discrimination include <b>Cave Comparisons</b>, <b>Jumping Jaguar Flash</b>, <b>Sky Scanning</b> and <b>Volcanic Patterns</b>.</p>
<p><b>Reasoning</b> – the ability to form concepts and solve problems using unfamiliar information.</p>	<p>A question which asks students to determine how a disease might “affect the structure and/or function of an organism” in a given situation.</p>	<p><b>Ancient Logic and Reasoning</b> and <b>Piranha Pass</b> are two of the exercises that develop reasoning skills.</p>
<p><b>Logic</b> – the ability to reason and think rationally and analytically.</p>	<p>A question which asks students to “make the relationship between the evidence and explanations” for a given experiment.</p>	<p><b>Llama Logic</b> and <b>Tree Tic-Tac-Toe</b> are two of the exercises that develop logic skills.</p>

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