

## How Cognitive Skills Relate to **Indiana** Academic Standards Questions



### Reading:

Cognitive Skill	Application to Indiana Standards Questions	BrainWare Safari Exercises Developing the Skill
<p><b>Sustained Attention</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>Iguana Lookout</b>, <b>Jungle Labyrinth</b>, <b>Rhythm Ribbet</b>, and <b>Slithering Symbols</b>.</p>
<p><b>Visual Sequential Memory</b> – the ability to recall a sequence of bits of information in the same order as originally received.</p>	<p>“Discuss the causes and effects of the main event of the plot, when the father in the story acquires a mail-order bride. Describe the effects of this event, including the adjustments that the children make to their new stepmother and that Sarah makes to living on the prairie.”</p>	<p><b>Arrow Point Bridge</b>, <b>Bear Shuffle</b>, <b>Rhythm Ribbet</b> and <b>Slithering Symbols</b> are exercises that work on visual sequential memory.</p>
<p><b>Conceptual Thinking</b> – the ability to recognize a collection of features that go together to create an idea or category of ideas.</p>	<p>“Describe the similarities in these tales in which a main character, often an animal, outwits other animals, humans, or forces in nature. Then, tell how these tales are different from each other.”</p>	<p><b>Ancient Logic and Reasoning</b> and <b>Llama Logic</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 Indiana Academic Standards place demands on cognitive skills. This is not meant to provide a complete perspective on cognitive skills nor a thorough analysis of the Indiana Academic 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 Indiana Department of Education Materials for Grade 4.

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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>“Use a picture of a circle divided into 6 equal pieces to find <math>\frac{5}{6}</math> and <math>\frac{1}{3}</math>”</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>“In a collection of parallelograms, rhombuses, and trapezoids, pick out those that are the same shape and size”</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>“The buses you use for a school trip hold 55 people each. How many buses will you need to seat 180 people?”</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>“The line plot below shows the heights of fast-growing plants reported by third-grade students. Describe any patterns you can see in the data using the words ‘most,’ ‘few,’ and ‘none.’”</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>“Know and explain that artifacts and preserved remains provide some evidence of the physical characteristics and possible behavior of human beings who lived a very long time ago.”</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>“Make simple and safe electrical connections with various plugs, sockets, and terminals.”</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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