

## Science GE DOK Alignment Chart

LIFE SCIENCE

Grades 5-6

GE 30-32

DOK & NECAP Release Item Codes	GE Statement with Ceiling DOK	Science Concepts	Examples/Practice Items
<b>Enduring Knowledge: All living organisms and their component cells have identifiable characteristics that allow for survival.</b>			
<p><b>DOK 1</b></p> <p><b>DOK 1</b></p> <p><b>DOK 2</b></p>	<p><b>S5-6:30 (DOK 2)</b>  <b>Students demonstrate their understanding of Structure and Function-Survival Requirements by...</b></p> <ul style="list-style-type: none"> <li>Explaining that the cell, as the basic unit of life, has the same survival needs as the <b>organism</b>.</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>Identifying and drawing individual cells seen through a microscope and recognizing that most cells are microscopic.</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>Diagramming the exchange of materials through a cell <b>membrane</b>.</li> </ul>	<p>Science Concepts:</p> <p>a. All organisms are made of one or more cells. Cells are the basic unit of structure and function in an organism. All cells carry out the same basic functions to survive. Cells need to:</p> <ul style="list-style-type: none"> <li>Obtain food (energy) and materials for growth and repair,</li> <li>Eliminate (recycle) waste,</li> <li>Reproduce,</li> <li>Provide for defense.</li> </ul> <p>b. All cells are enclosed in a <b>membrane</b> that allows materials to pass into and out of the cell.</p> <p>c. Most cells are microscopic.</p>	
<b>S5-6:31 Not assessed at this grade level.</b>			
<p><b>DOK 2</b> LS1(5-8) SAE + FAF-2</p> <p><b>DOK 2</b> LS1(5-8) SAE + FAF-2</p>	<p><b>S5-6:32 (DOK 2)</b>  <b>Students demonstrate their understanding of Differentiation by...</b></p> <ul style="list-style-type: none"> <li>Explaining the relationship among cells, tissues, organs and systems.</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>Observing plant or animal tissue and explaining how “<b>specialized</b>” cells help to support the <b>specialized</b> function of <b>tissue</b> (e.g., Muscle cells form muscle tissue; skin cells form skin tissue; nerve cells form brain tissue).</li> </ul>	<p>Science Concepts:</p> <p>a. In addition to basic functions, cells can carry out “specialized” functions that support the survival of groups of cells and the organism.</p> <p>b. Groups of similar cells connect and work together to form <b>tissue</b>. Groups of tissue form organs, and groups of organs form systems.</p>	

5-6 LIFE SCIENCE GEs  
Science GE DOK Alignment Chart

LIFE SCIENCE

Grades 5-6

GE 33-35

DOK & NECAP Release Item Codes	GE Statement with Ceiling DOK	Science Concepts	Examples/Practice Items
<b>Enduring Knowledge: All living organisms and their component cells have identifiable characteristics that allow for survival.</b>			
<p><b>DOK 2</b> LS1(5-8) SAE -7</p>	<p><b>S5-6:33 (DOK 2)</b>  <b>Students demonstrate their understanding of how Energy Flow Within Cells Supports an Organism’s Survival by...</b>  <ul style="list-style-type: none"> <li>• Demonstrating through drawings, stories or models that cells take in food and oxygen to produce energy and send out waste materials.</li> </ul> </p>	<p>Science Concepts:            a. In order to obtain energy for all the functions of survival, individual cells take in food and oxygen to produce energy and send out waste materials.</p>	
<b>Enduring Knowledge: Energy enters an ecosystem in the form of sunlight and flows through the system to each cell. Matter interacts, changes and recycles in an ecosystem. Populations of organisms survive by maintaining interdependent relationships with one another and by utilizing biotic and abiotic resources from the environment.</b>			
<p><b>DOK 3</b> LS2(5-8) SAE -6</p>	<p><b>S5-6:34 (DOK 3)</b>  <b>Students demonstrate their understanding of Energy Flow in an Ecosystem by...</b>  <ul style="list-style-type: none"> <li>• Developing a model that shows how the flow of energy from the sun is transferred to <b>organisms</b> as food in order to sustain life.</li> </ul> </p>	<p>Science Concept:            a. Energy within an <b>ecosystem</b> originates from the sun. Plants use energy from the sun, carbon dioxide, and water, to make energy rich food and oxygen. Plants are <b>producers</b>.            b. Animals eat food that plants make combined with oxygen to produce energy, carbon dioxide, and water. Animals are consumers.</p>	
<p><b>DOK 2</b> LS1(5-8) SAE + FAF-2 LS2(5-8) SAE -7</p>	<p><b>S5-6:35 (DOK 2)</b>  <b>Students demonstrate their understanding of Food Webs in an Ecosystem by...</b>  <ul style="list-style-type: none"> <li>• Developing a model for a <b>food web</b> of a local <b>aquatic</b> and local <b>terrestrial</b> environment.</li> </ul> </p>	<p>Science Concept:            a. Food webs model the interdependent relationships that <b>organisms</b> engage in as they acquire their food and energy needs. <b>Aquatic</b> food webs (fresh water and marine) are supported by microscopic ocean plants. Land (<b>terrestrial</b>) food webs are supported by land plants.</p>	

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<b>DOK 3</b> LS1(5-8) INQ + SAE -1 LS2(5-8) INQ + SAE -5 LS2(5-8) SAE -6 LS2(5-8) SAE -7	<b>S5-6:36 (DOK 3)</b> <b>Students demonstrate their understanding of Equilibrium in an Ecosystem by...</b> <ul style="list-style-type: none"> <li>Experimenting with a closed system and drawing conclusions about how an environmental change affects the system (e.g., bottle biology).</li> </ul>	Science Concept: a. The number of organisms an ecosystem can support depends on the kinds of organisms present and the availability of biotic and abiotic resources (i.e., quantity of light and water, range of temperatures, and soil composition).	
<b>DOK 2</b> LS2(5-8) SAE -6 LS2(5-8) SAE -7	<b>S5-6:37 (DOK 2)</b> <b>Students demonstrate their understanding of Recycling in an Ecosystem by...</b> <ul style="list-style-type: none"> <li>Tracing the flow of energy through an ecosystem and identifying the recycling role of decomposers in a variety of situations.</li> </ul>	Science Concept: a. Decomposers, primarily bacteria and fungi, are consumers that use waste material and dead organisms for food.	
<b>Enduring Knowledge: All living things exhibit patterns of similarity in their structures, behaviors and biochemistry</b>			
<b>S5-6:38 Not assessed at this grade level</b>			
<b>DOK 2</b> LS3(5-8) POC -9 LS4(5-8) INQ + POC -11	<b>S5-6:39 (DOK 2)</b> <b>Students demonstrate their understanding of Evolution/Natural Selection by...</b> <ul style="list-style-type: none"> <li>Explaining, through engaging in simulations, how a variation in a characteristic (<b>trait</b>) enables an organism to survive in a changing environment.</li> </ul>	Science Concepts: a. When the environment changes some plants and animals with advantageous traits are able to survive; others, with less-advantageous traits, either move to new locations or die.	