

## Science Unit Map – Grade 5 – Trimester 3

### **Trimester Focus:**

- Evolution and Traits of Organisms

### **Big Ideas:**

Traits are influenced by both genetics of the individual and the environment.

- Traits can be classified as either inherited or acquired.
- Each organism (plants and animals) have specific behavioral and physical characteristics allowing them to better survive in a given environment.
- As environments change over time, these characteristics may change (adaptations) to allow them to continue to survive or flourish in their environment.
- Fossils provide evidence that life forms have changed over time and were influenced by changes in environmental conditions including catastrophic events.
- Organisms that are similar in anatomical structures are more likely to be more closely related than those whose structures are less similar to one another.

GLCEs	Vocabulary	Resources (See Curriculum Calendar for Details)	Assessment/Activities
<p><i>Explain the influence of environment and Genetics on individuals</i></p> <p><i>Distinguish between inherited and acquired traits</i></p> <p><i>Explain how behavioral characteristics (adaptation, instinct, learning, habit) of animals help them to survive in their environment</i></p> <p><i>Describe the physical characteristics or traits of organisms that help them survive in their environment</i></p> <p><i>Describe how fossils provide evidence of how living things and environmental conditions have changed</i></p> <p><i>Analyze the relationship of environmental change and catastrophic events (volcanic eruption, asteroid impacts, tsunami) to species extinction</i></p> <p><i>Relate degree of similarity in anatomical features to the classification of contemporary organisms</i></p> <p><b>*See inquiry and reflection GLCEs</b></p>	<p>anatomical features genetic relatedness adaption heredity inherited traits acquired traits</p>	<p><u>Textbook:</u></p> <ul style="list-style-type: none"> <li>• National Geographic Life Science Chapter 4 (chapter 1 - review vocabulary as an introduction)</li> </ul> <p><u>Suggested Trade Books:</u></p> <ul style="list-style-type: none"> <li>• Fossils by Ann O. Squire</li> </ul> <p><u>Website, Video Streaming, &amp; Smartboard Activities:</u></p> <ul style="list-style-type: none"> <li>• myNGconnect.com</li> <li>• See grade level resource packet</li> </ul> <p><u>Grade Level Resource Packet:</u></p> <ul style="list-style-type: none"> <li>• See unit Evolution and Traits of Organisms</li> </ul>	<p><u>Formative Assessment</u></p> <ul style="list-style-type: none"> <li>• Evaluate student presentation of information on environmental influences affecting plants traits.</li> <li>• Evaluate student design and investigations of the classroom habitat and presentations.</li> <li>• Evaluate student diagrams/illustrations depicting characteristics allowing survival in particular environments.</li> <li>• Evaluate student research and presentations of organisms' changes over time.</li> <li>• Evaluate students' ability to identify characteristics allowing organisms to survive in their environment.</li> <li>• Evaluate the list of appropriate characteristics to help scientists classify organisms.</li> <li>• Evaluate students' completed Venn diagrams.</li> </ul> <p><u>Summative Assessment</u></p> <ul style="list-style-type: none"> <li>• Give each student 3 separate index cards and label the first with an A (Acquired), the second with an I (Inherited) and the third with a B (Both). Read different traits aloud and have each student independently choose which type of trait it represents. Visually scan the room to determine each student's understanding (or misunderstanding) of the Content Expectation.</li> <li>• Design matching type questions for inherited and acquired traits.</li> <li>• Describe situations in which the environment would affect a trait of a plant or animal and have student describe how the trait would be affected in the given situation.</li> <li>• Choose an organism to have students identify the behavioral and physical characteristics that allow it to survive in its particular environment.</li> <li>• Students analyze fossil evidence to determine how environmental conditions changed over time.</li> <li>• List organisms that would be placed into a similar group based on characteristics and have students determine the similarity.</li> <li>• Give students different organisms to determine the degree of relatedness.</li> <li>• List organisms that would be placed into a similar group based on characteristics and have students determine the similarity.</li> </ul>