



**MOHAWK**

**Local School District**

*Preparing today's students for tomorrow's challenges*

Mohawk Local Schools Grade BIOLOGY

Quarter 3 Curriculum Guide

Guiding Principles of the Scientific Inquiry/Learning Cycle:

Evaluate...Engage...Explore...Explain...Extend...Evaluate

- Identify ask valid and testable questions
- Research books, other resources to gather known information
- Plan and Investigate
- Use appropriate mathematics, technology tools to gather, interpret data.
- Organize, evaluate, interpret observations, measurements, other data
- Use evidence, scientific knowledge to develop explanations
- Communicate results with graphs charts, tables

Critical Areas of Focus Being Addressed:

- Evolution
- Diversity and Interdependence of Life
- Scientific Inquiry

Content Statements Addressed and Whether they are Knowledge, Reasoning, Performance Skill, or Product:  
 (DOK1) (DOK2) (DOK3) (DOK4)

Underpinning Targets Corresponding with Standards and Whether they are Knowledge, Reasoning, Performance Skill, or Product: "I can.....", "Students Will Be Able To....."

Diversity of Life

- State evidence of evolutionary theory from real-world

<p>(DOK1)      (DOK2)      (DOK3)</p>	<p>examples (e.g., antibiotic resistant bacteria, fossil record, molecular and structural homology); (PS)</p> <ul style="list-style-type: none"> <li>• Interpret cladograms showing relationships between species; (R)</li> <li>• Comprehend different scenarios in which environmental changes influence selective pressure on a population; (R)</li> <li>• Give examples of speciation between isolated populations (e.g., leopard frogs, anole lizard, Central American hummingbirds); (K)</li> <li>• Interpret tables or data showing gene frequency changes over time (e.g., bottleneck cheetahs). (R)</li> <li>• Predict how factors affect evolution of a population or populations; (R)</li> <li>• Give evidence, determining the relatedness of groups; (PS)</li> <li>• Explain how variations within populations in a changing environment can lead to evolution; (R)</li> <li>• Describe how speciation occurred in two related populations; (R)</li> <li>• Give a real-world example, explaining and predict how a population has responded to environmental changes. (PS)</li> </ul>
<p>Evolution Mechanisms (DOK2)      (DOK3)</p>	<ul style="list-style-type: none"> <li>• Differentiate between mechanisms of speciation (gene flow, mutation, speciation, natural selection, genetic drift, sexual selection); (R)</li> <li>• Describe evidence for evolution (e.g., fossil record, molecular and structural homology, biogeography). (PS)</li> <li>• Compare the survivability of traits between populations in different environments; (R)</li> <li>• Compare evolutionary mechanisms illustrated in a variety of populations. (R)</li> <li>• Be given data and/or a scenario, making and justifying</li> </ul>

	<p>a conclusion about evolutionary mechanisms in a population; (PS)</p>
<p>Classification systems of organism relatedness (DOK1) (DOK2)</p>	<ul style="list-style-type: none"> <li>• Explain diversity of species and ecological niches resulting from billions of years of evolution; (R)</li> <li>• Classify using morphological and molecular evidence; (K)</li> <li>• Analyze data tables showing genetic relatedness between organisms (R)</li> <li>• Interpret and analyze cladograms; (R)</li> <li>• Use cladograms to compare and contrast the degree of relatedness between organisms; (R)</li> </ul>