



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

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