



# MOHAWK

## Local School District

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

### Mohawk Local Schools 7<sup>th</sup> Grade - SCIENCE

### Quarter 4 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:

- Conservation of Matter and Energy
- Science Inquiry and Applications

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....."

Energy can be transferred through a variety of ways  
 (DOK 2)

- The students can explain the relationship between mechanical energy transferred, forces and resulting motion. **R**
- The students can demonstrate that vibrations cause wave-like disturbances that transfer energy from one

	<p>place to another. <b>R</b></p> <ul style="list-style-type: none"> <li>• The students can differentiate between transverse and longitudinal waves. <b>R</b></li> <li>• The students can describe waves by their speed, wavelength, amplitude, and frequency. <b>R</b></li> <li>• The students can demonstrate and explain how the wave speed is dependent upon frequency and wavelength, which is directly related to the materials through which the wave travels. <b>R</b></li> <li>• The students can explain that the pitch of a sound wave increases with the frequency and the loudness increases with the amplitude. <b>R</b></li> <li>• The student can explain that thermal energy is transferred when moving atoms collide (conduction). <b>R</b></li> <li>• The student can explain that thermal energy can be transformed into waves that radiate outward (radiation). <b>R</b></li> </ul>
<p>The properties of matter are determined by the arrangement of atoms. (DOK 3)</p>	<ul style="list-style-type: none"> <li>• The students can explain that mixtures are materials composed of two or more substances that retain their separate atomic compositions when mixed. <b>R</b></li> <li>• The students can describe how elements are grouped based on their properties and position on the periodic table. <b>PS</b></li> <li>• The students can use the pH scale to compare and evaluate the acidity or alkalinity of a compound. <b>R</b></li> <li>• The students can measure pH values in the natural world (e.g. soil, water). <b>K</b></li> <li>• The students can investigate how mass is conserved when a substance undergoes a physical or chemical change. <b>R</b></li> <li>• The students can explain that in a closed system, the number and type of atoms stays the same, even if the atoms are rearranged. <b>R</b></li> </ul>

