

Grade 7 Science – Curriculum Overview

	Unit 1 (40 Days)	Unit 2 (40 Days)	Unit 3 (40 Days)	Unit 4 (40 Days)
Unit Titles	Human Body	Water Bottles Everywhere	Energy and Movement	Waves
Essential Question(s)	How do subsystems within the body work together to accomplish and perform basic life functions?	How can evidence from investigations be used to explain how physical and chemical properties change during chemical reactions?	How can we apply the different types of force and energy to explain the reactions that occur within a system?	How can understanding waves help us to understand the effects of humans interacting with their environment?
Big Ideas	<ul style="list-style-type: none"> • All living things are made of cells, the basic unit of life. • Organisms are either unicellular or multicellular. • The body consists of many subsystems that work independently and together for the body to function. • Sense receptors respond to stimuli and send messages as signals that travel along nerve cells to the brain. • Food broken down during chemical reactions in organisms form new molecules for growth or released energy. • During the process of cellular respiration carbon reacts with oxygen to release stored energy. 	<ul style="list-style-type: none"> • Some chemical reactions release energy or store energy. • Synthetic materials undergo a chemical change by using Natural resources and the product produced serves the needs of society. 	<ul style="list-style-type: none"> • As kinetic energy of an object changes, energy is transferred to or from the object. • Gravitational interactions are attractive and depend on the masses of interacting objects. 	<ul style="list-style-type: none"> • Understanding the mathematical properties of waves provides information about the energy that a wave can produce. • Natural and man-made waves can be harmful to the environment, but design solutions can be applied to mitigate that damage. • Digital signals provide a more reliable data source that can be used to predict natural hazards. • Waves can be transmitted, absorbed or reflective in different ways depending on the medium it is traveling through. • Humans have added to the rise in global warming in ways that can be quantitatively identified. • Human population growth combined with past and current geosciences process display how the consumption of Natural resources impact the ecosystem.