

Curriculum – Grade 7 Science

	The Nature of Science	Biological Science	Environmental Science
What your child will learn	<ul style="list-style-type: none"> • How to interpret and explain a variety of scientific data • How to use scientific instruments safely to make measurements • The steps used in the scientific method • Conversions from English to Metric Units 	<ul style="list-style-type: none"> • Characteristics of living things • Types of cells and organelles and their functions • Proper use of a microscope • Classification systems of living organisms • Principles governing genetic rules and traits 	<ul style="list-style-type: none"> • Basic ecological principles with particular emphasis on PA wetlands, agriculture, biodiversity, endangered species, etc. • Roles of consumers, producers and decomposers • The interdependence of species in an ecosystem • How species change
What your child will do	<ul style="list-style-type: none"> • Select appropriate equipment to measure size, weight, shape, and temperature of living and nonliving objects • Interpret data, formulate and design models, and predict solutions • Generate questions about objects, organisms, and/or events that can be answered through scientific investigation • Conduct experiments using the scientific method 	<ul style="list-style-type: none"> • Use scientific equipment to study the characteristics of life and preserved specimens • Classify organisms according to modern taxonomy • Perform activities to demonstrate how traits are inherited • Identify organisms using a microscope • Discuss current events (<i>cloning, genetic disorders, human genome project, etc</i>) 	<ul style="list-style-type: none"> • Create projects relevant to PA ecology • Create a food chain, food web, and food pyramid • Describe human impacts on ecosystems • Discuss interrelationships between organisms in an ecosystem • Identify how one species can impact other species' survival • Explain natural selection and its relationship species' adaptations

<p>What you'll see (products)</p>	<ul style="list-style-type: none"> • Lab activities following the steps of the scientific method • Problem-solving activities • Graphs, tables, charts • Independent Science Fair project (GHP only) 	<ul style="list-style-type: none"> • Lab activities, dichotomous keys and field guides to identify/classify organisms • Various projects related to bioengineering, DNA, cell diagrams, etc. • Cell diagrams/ projects, Punnett Squares, etc. 	<ul style="list-style-type: none"> • A heightened awareness of human impact on the environment, both globally and locally • Food chains, food webs, energy pyramids in relation to producers, consumers and decomposers
<p>How you can help</p>	<ul style="list-style-type: none"> • Encourage your child to use the scientific method to solve everyday problems • Assist your child with the Science Fair project (GHP only) • Monitor homework and your child's grades online 	<ul style="list-style-type: none"> • Dialogue with your child about different biological systems and how they work • Discuss current event topics that are relevant • Discuss genetic trends in your family • Monitor homework and your child's grades online 	<ul style="list-style-type: none"> • Encourage family-shared outdoor activities • Discuss/assess family impact on local environmental resources • Reinforce "green" concepts such as recycling and conserving energy • Monitor homework and your child's grades online