

WILD (W) AND AQUATIC WILD (AW) Correlations: SCIENCE GRADE 7

Grade 7 : Embedded Inquiry	
Learning Expectations	Project WILD (W) AND AQUATIC WILD (AW) Correlations
<p>GLE 0707.Inq.1 Design and conduct open-ended scientific investigations.</p>	<p>Seed Need, W98 - Students gather seeds by going outside and wearing socks over their shoes.</p>
<p>GLE 0707.Inq.2 Use appropriate tools and techniques to gather, organize, analyze, and interpret data.</p>	<p>Alice in Waterland, AW151 - Students gather data on their daily water use for 5 days. They implement water conservation and gather another set of data to compare results.</p> <p>Ecosystem Facelift, W166 - Students research potential plants to use in their proposed site restoration.</p> <p>Fishy Who's Who, AW8 - Students complete an inventory of fish habitats that exist in their area, obtain information about the various fish species that occur in these habitats, and locate the fish species on a map.</p> <p>Improving Wildlife Habitat in the Community, W440 - Students design and accomplish a project to improve Wildlife habitat in their community.</p> <p>Litter We Know, W434 - Students collect and evaluate litter's potential effects on wildlife, making collages.</p> <p>Noisy Neighbors, W317 - Students conduct an investigation of noise levels in their community and generate and test hypotheses.</p> <p>No Water Off a Duck's Back, W305 - Students conduct an investigation to explore what happens to wildlife during an oil spill.</p> <p>Planning for People and Wildlife, W436 - Students design communities; and build and evaluate models of their community designs.</p> <p>Puddle Wonders!, AW114 - Students will observe water that accumulates in puddles.</p> <p>Water Canaries, AW24 - Students investigate a stream or pond using sampling techniques.</p> <p>Water's Going On?, AW149 - Students design and try out ways to conserve water.</p> <p>What's in the Air?, AW136 - Students collect data over a two week period on grass seedlings "watered" with different vinegar solutions.</p> <p>Where Does Water Run?, AW21 - Students measure a site and calculate the volume of rainfall the site receives.</p>

<p>GLE 0707.Inq.3 Synthesize information to determine cause and effect relationships between evidence and explanations.</p> <p>GLE 0707.Inq.4 Recognize possible sources of bias and error, alternative explanations, and questions for further exploration.</p>	
<p>GLE 0707.Inq.5 Communicate scientific understanding using descriptions, explanations, and models.</p>	<p>Aquatic Times, AW188 - Students can use this “newspaper writing” approach to communicate the results of inquiry.</p>

Grade 7 : Embedded Technology & Engineering

Learning Expectations	Checks for Understanding	Project WILD (W) AND AQUATIC WILD (AW) Correlations
<p>GLE 0707.T/E.1 Explore how technology responds to social, political, and economic needs.</p> <p>GLE 0707.T/E.2 Know that the engineering design process involves an ongoing series of events that incorporate design constraints, model building, testing, evaluating, modifying, and retesting.</p> <p>GLE 0707.T/E.3 Compare the intended benefits with the unintended consequences of a new technology.</p> <p>GLE 0707.T/E.4 Describe and explain adaptive and assistive bioengineered products.</p>	<p>0707.T/E.1 Use appropriate tools to test for strength, hardness, and flexibility of materials.</p> <p>7707.T/E.2 Apply the engineering design process to construct a prototype that meets certain specifications.</p> <p>0707.T/E.3 Explore how the unintended consequences of new technologies can impact society.</p> <p>0707.T/E.4 Research bioengineering technologies that advance health and contribute to improvements in our daily lives.</p> <p>0707.T/E.5 Develop an adaptive design and test its effectiveness.</p>	

Grade 7 : Standard 1 - Cells

Learning Expectations	Checks for Understanding	Project WILD (W) AND AQUATIC WILD (AW) Correlations
<p>GLE 0707.1.1 Make observations and describe the structure and function of organelles found in plant and animal cells.</p> <p>GLE 0707.1.2 Summarize how the different levels of organization are integrated within living systems.</p>	<p>0707.1.1 Examine and describe plant and animal cells using compound microscopes.</p> <p>0707.1.2 Identify the function of the major plant and animal cellular organelles.</p> <p>0707.1.3 Make a Venn diagram to compare the structures and functions of an animal cell with a city or school.</p> <p>0707.1.4 Build a 3-D model of a cell.</p>	
<p>GLE 0707.1.3 Describe the function of different organ systems and how collectively they enable complex multicellular organisms to survive.</p>	<p>0707.1.5 Construct a poster that illustrates the hierarchy among cells, tissues, organs, organ systems, and organisms.</p> <p>0707.1.6 Describe the function of different organ systems.</p> <p>0707.1.7 Explain how different organ systems interact to enable complex multicellular organisms to survive.</p> <p>0707.1.8 Apply the idea of the division of labor to explain why living things are organized into cells, tissues, organs, and organ systems.</p>	<p>Noisy Neighbors, W317</p>
<p>GLE 0707.1.4 Illustrate how cell division occurs in sequential stages to maintain the chromosome number of a species.</p> <p>GLE 0707.1.5 Observe and explain how materials move through simple diffusion.</p>	<p>0707.1.9 Model the movement of chromosomes during plant cell division.</p> <p>0707.1.10 Design a demonstration that illustrates how materials move across a semi-permeable membrane by simple diffusion.</p>	

Grade 7 : Standard 3 - Flow of Matter and Energy

Learning Expectations	Checks for Understanding	Project WILD (W) AND AQUATIC WILD (AW) Correlations
<p>GLE 0707.3.1 Distinguish between the basic features of photosynthesis and respiration.</p>	<p>0707.3.1 Associate the fundamental processes of photosynthesis and respiration with appropriate cell structures.</p> <p>0707.3.2 Examine and identify the chloroplasts in a leaf cell.</p> <p>0707.3.3 Identify the materials used by plants to make food.</p> <p>0707.3.4 Create a chart that compares the reactants and products of photosynthesis and respiration.</p> <p>0707.3.5 Model the pathways of water, oxygen, and carbon dioxide through a plant.</p>	
<p>GLE 0707.3.2 Investigate the exchange of oxygen and carbon dioxide between living things and the environment.</p>	<p>0707.3.6 Describe the movement of oxygen and carbon dioxide between living things and the environment.</p> <p>0707.3.7 Describe structures that animals use to obtain oxygen.</p>	<p>Fishy Who's Who, AW8</p>

Grade 7 : Standard 4 - Heredity

Learning Expectations	Checks for Understanding	Project WILD (W) AND AQUATIC WILD (AW) Correlations
<p>GLE 0707.4.1 Compare and contrast the fundamental features of sexual and asexual reproduction.</p>	<p>0707.4.1 Classify organisms according to whether they reproduce sexually or asexually.</p>	
<p>GLE 0707.4.2 Demonstrate an understanding of sexual reproduction in flowering plants.</p>	<p>0707.4.2 Label and explain the function of the reproductive parts of a flower.</p> <p>0707.4.3 Describe various methods of plant pollination.</p>	<p>Seed Need, W98</p>
<p>GLE 0707.4.3 Explain the relationship among genes, chromosomes, and inherited traits.</p> <p>GLE 0707.4.4 Predict the probable appearance of offspring based on the genetic characteristics of the parents</p>	<p>0707.4.4 Investigate the relationship among DNA, genes, and chromosomes.</p> <p>0707.4.5 Explain the differences between dominant and recessive traits.</p> <p>0707.4.6 Use a Punnett square to predict the genotypes of offspring resulting from a monohybrid cross.</p> <p>0707.4.7 Draw a phenotypically accurate picture of an individual whose traits are modeled by the role of a die.</p>	

Grade 7 : Standard 7 – The Earth

Learning Expectations	Checks for Understanding	Project WILD (W) AND AQUATIC WILD (AW) Correlations
<p>GLE 0707.7.1 Describe the physical properties of minerals.</p>	<p>0707.7.1 Organize and explain information about the properties of minerals and their uses.</p>	

<p>GLE 0707.7.2 Summarize the basic events that occur during the rock cycle.</p>	<p>0707.7.2 Label a diagram that depicts the major processes of the rock cycle.</p> <p>0707.7.3 Distinguish among sedimentary, igneous, and metamorphic rocks and relate these to a simple diagram of the rock cycle.</p>	<p>Alice in Waterland, AW151 Puddle Wonders!, AW114 Water Wings, AW110 Where Does Water Run?, AW21</p>
<p>GLE 0707.7.3 Analyze the characteristics of the earth's layers and the location of the major plates.</p> <p>GLE 0707.7.4 Explain how earthquakes, mountain building, volcanoes, and sea floor spreading are associated with movements of the earth's major plates.</p>	<p>0707.7.4 Recognize that the earth's layers have different thickness, states of matter, densities, and chemical makeup.</p> <p>0707.7.5 Analyze the relationship between plate movements and areas of earthquake activity.</p> <p>0707.7.6 Analyze the relationship between plate movements and mountain building.</p> <p>0707.7.7 Analyze the relationship between plate movements, volcanoes, and sea floor spreading.</p>	
<p>GLE 0707.7.5 Differentiate between renewable and nonrenewable resources in terms of their use by man.</p>	<p>0707.7.8 Determine the impact of man's use of renewable and nonrenewable resources on future supplies.</p>	<p>Alice in Waterland, AW151 Fishy Who's Who, AW8 Water's Going On?, AW149 What You Wear Is What They Were, W210</p>
<p>GLE 0707.7.6 Evaluate how human activities affect the earth's land, oceans, and atmosphere.</p>	<p>0707.7.9 Evaluate how human activities affect the condition of the earth's land, water, and atmosphere.</p>	<p>Aquatic Roots, AW177 Changing the Land, W345 Checks and Balances, W387 Dragonfly Pond, AW198 Ecosystem Facelift, W166 EnviroEthics, W443 Hazardous Links, Possible Solutions, W326 History of Wildlife Management, W267 How Many Bears Can Live in this Forest?, W23 The Hunter, W287 Improving Wildlife Habitat in the Community, W440 Let's Talk Turkey, W248</p>

		<p> Lobster in Your Lunch Box, W245 Litter We Know, W434 Migration Barriers, W308 Migration Headache, AW15 Net Gain, Net Effect, AW85 No Water Off a Duck's Back, W305 Oh Deer!, W36 Pay to Play, W216 Planning for People and Wildlife, W436 Planting Animals, W152 Pond Succession, AW66 Pro and Con: Consumptive and Non-consumptive Uses of Wildlife, W338 Riparian Zone, W341 Shrinking Habitat, W310 Smokey Bear Said What?, W314 Something's Fishy Here!, AW145 Time Lapse, W158 To Dam or Not to Dam, AW184 Water Canaries, AW24 Watered-Down History, AW91 What You Wear Is What They Were, W210 What's in the Air?, AW136 What's in the Water?, AW140 Where Does Water Run?, AW21 Where Have All the Salmon Gone?, AW180 Wildwork, W385 </p>
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Grade 7 : Standard 11 - Motion		
Learning Expectations	Checks for Understanding	Project WILD (W) AND AQUATIC WILD (AW) Correlations
GLE 0707.11.1 Identify six types of simple machines.	0707.11.1 Compare the six types of simple machines.	

<p>GLE 0707.11.2 Apply the equation for work in experiments with simple machines to determine the amount of force needed to do work.</p>	<p>0707.11.2 Compete an investigation to determine how machines reduce the amount of force needed to do work.</p>	
<p>GLE 0707.11.3 Distinguish between speed and velocity.</p>	<p>0707.11.3 Summarize the difference between the speed and velocity based on the distance and amount of time traveled.</p>	
<p>GLE 0707.11.4 Investigate how Newton’s laws of motion explain an object’s movement.</p> <p>GLE 0707.11.5 Compare and contrast the basic parts of a wave.</p> <p>GLE 0707.11.6 Investigate the types and fundamental properties of waves.</p>	<p>0707.11.4 Recognize how a net force impacts an object’s motion.</p> <p>0707.11.5 Create a graphic organizer to illustrate and describe the basic parts of a wave.</p> <p>0707.11.6 Compare how transverse and longitudinal waves are produced and transmitted.</p>	