WET Correlations: SCIENCE GRADE 7

Grade 7 : Embedded Inquiry

Learning Expectations	Checks for Understanding	Project WET Correlations
GLE 0707.Inq.1 Design and conduct open-ended scientific investigations. **GLE 0707.Inq.2** Use appropriate tools and techniques to gather, organize, analyze, and interpret data. **GLE 0707.Inq.3** Synthesize information to determine cause and effect relationships between evidence and explanations. **GLE 0707.Inq.4** Recognize possible sources of bias and error, alternative explanations, and questions for further exploration. **GLE 0707.Inq.5** Communicate scientific understanding using descriptions, explanations, and models.	**0707.Inq.1** Design and conduct an open-ended scientific investigation to answer a question that includes a control and appropriate variables. **0707.Inq.2** Identify tools and techniques needed to gather, organize, analyze, and interpret data collected from a moderately complex scientific investigation. **0707.Inq.3** Use evidence from a dataset to determine cause and effect relationships that explain a phenomenon. **0707.Inq.4** Review an experimental design to determine possible sources of bias or error, state alternative explanations, and identify questions for further investigation. **0707.Inq.5** Design a method to explain the results of an investigation using descriptions, explanations, or models.	**A-maze-ing Water (219)** **Branching Out! (129)** **People of the Bog (89)** **Rainy-Day Hike (186)** **wAteR in moTion (450)** **Wetland Soils in Living Color (212)**

Grade 7 : Embedded Technology & Engineering

Learning Expectations	Checks for Understanding	Project WET Correlations
GLE 0707.T/E.1 Explore how technology responds to social, political, and economic needs. **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. **GLE 0707.T/E.3** Compare the intended benefits with the unintended consequences of a new technology. **GLE 0707.T/E.4** Describe and explain adaptive and assistive bioengineered products.	**0707.T/E.1** Use appropriate tools to test for strength, hardness, and flexibility of materials. **7707.T/E.2** Apply the engineering design process to construct a prototype that meets certain specifications. **0707.T/E.3** Explore how the unintended consequences of new technologies can impact society. **0707.T/E.4** Research bioengineering technologies that advance health and contribute to improvements in our daily lives. **0707.T/E.5** Develop an adaptive design and test its effectiveness.	**Energetic Water (242)** **Irrigation Interpretation (254)** **wAteR in moTion (450)**

Grade 7 : Standard 1 - Cells

Learning Expectations	Checks for Understanding	Project WET Correlations
GLE 0707.1.1 Make observations and describe the structure and function of organelles found in plant and animal cells. **GLE 0707.1.2** Summarize how the different levels of organization are integrated within living systems.	**0707.1.1** Examine and describe plant and animal cells using compound microscopes. **0707.1.2** Identify the function of the major plant and animal cellular organelles. **0707.1.3** Make a Venn diagram to compare the structures and functions of an animal cell with a city or school. **0707.1.4** Build a 3-D model of a cell.	

GLE 0707.1.3 Describe the function of different organ systems and how collectively they enable complex multicellular organisms to survive.	**0707.1.5** Construct a poster that illustrates the hierarchy among cells, tissues, organs, organ systems, and organisms. **0707.1.6** Describe the function of different organ systems. **0707.1.7** Explain how different organ systems interact to enable complex multicellular organisms to survive. **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.	
GLE 0707.1.4 Illustrate how cell division occurs in sequential stages to maintain the chromosome number of a species.	**0707.1.9** Model the movement of chromosomes during plant cell division.	
GLE 0707.1.5 Observe and explain how materials move through simple diffusion.	**0707.1.10** Design a demonstration that illustrates how materials move across a semi-permeable membrane by simple diffusion.	**Aqua Bodies (63)** **Let's Even Things Out (72)**

Grade 7 : Standard 3 - Flow of Matter and Energy

Learning Expectations	Checks for Understanding	Project WET Correlations
GLE 0707.3.1 Distinguish between the basic features of photosynthesis and respiration.	**0707.3.1** Associate the fundamental processes of photosynthesis and respiration with appropriate cell structures. **0707.3.2** Examine and identify the chloroplasts in a leaf cell. **0707.3.3** Identify the materials used by plants to make food.	

	0707.3.4 Create a chart that compares the reactants and products of photosynthesis and respiration.	
GLE 0707.3.2 Investigate the exchange of oxygen and carbon dioxide between living things and the environment.	**0707.3.5** Model the pathways of water, oxygen, and carbon dioxide through a plant. **0707.3.6** Describe the movement of oxygen and carbon dioxide between living things and the environment. **0707.3.7** Describe structures that animals use to obtain oxygen.	**People of the Bog (89)** **Thirsty Plants (116)**

Grade 7 : Standard 4 - Heredity

Learning Expectations	Checks for Understanding	Project WET Correlations
GLE 0707.4.1 Compare and contrast the fundamental features of sexual and asexual reproduction. .	**707.4.1** Classify organisms according to whether they reproduce sexually or asexually.	
GLE 0707.4.2 Demonstrate an understanding of sexual reproduction in flowering plants.	**0707.4.2** Label and explain the function of the reproductive parts of a flower. **0707.4.3** Describe various methods of plant pollination.	
GLE 0707.4.3 Explain the relationship among genes, chromosomes, and inherited traits. **GLE 0707.4.4** Predict the probable appearance of offspring based on the genetic characteristics of the parents	**0707.4.4** Investigate the relationship among DNA, genes, and chromosomes. **0707.4.5** Explain the differences between dominant and recessive traits. **0707.4.6** Use a Punnett square to predict the genotypes of offspring resulting from a monohybrid cross.	

	0707.4.7 Draw a phenotypically accurate picture of an individual whose traits are modeled by the role of a die.	

Grade 7: Standards 5 and 6 - Omitted

Grade 7 : Standard 7 – The Earth

Learning Expectations	Checks for Understanding	Project WET Correlations
GLE 0707.7.1 Describe the physical properties of minerals.	**0707.7.1** Organize and explain information about the properties of minerals and their uses.	**Molecules in Motion (47)**
GLE 0707.7.2 Summarize the basic events that occur during the rock cycle.	**0707.7.2** Label a diagram that depicts the major processes of the rock cycle. **0707.7.3** Distinguish among sedimentary, igneous, and metamorphic rocks and relate these to a simple diagram of the rock cycle.	**The Incredible Journey (161)** **Just Passing Through (166)**
GLE 0707.7.3 Analyze the characteristics of the earth's layers and the location of the major plates. **GLE 0707.7.4** Explain how earthquakes, mountain building, volcanoes, and sea floor spreading are associated with movements of the earth's major plates.	**0707.7.4** Recognize that the earth's layers have different thickness, states of matter, densities, and chemical makeup. **0707.7.5** Analyze the relationship between plate movements and areas of earthquake activity. **0707.7.6** Analyze the relationship between plate movements and mountain building. **0707.7.7** Analyze the relationship between plate movements, volcanoes, and sea floor spreading.	**Geyser Guts (144)** **Wetland Soils in Living Color (212)**

GLE 0707.7.5 Differentiate between renewable and nonrenewable resources in terms of their use by man.	**0707.7.8** Determine the impact of man's use of renewable and nonrenewable resources on future supplies.	**Choices & Preferences (367)** **Common Water (232)** **Dilemma Derby (377)** **A Drop in the Bucket (238)** **Easy Street (382)** **Every Drop Counts (307)** **Get the Ground Water . . . (136)** **The Long Haul (260)** **Money Down the Drain (328)** **Pass the Jug (392)** **Perspectives (397)** **Water Bill of Rights (403)** **Water Concentration (407)** **Water Meter (271)** **Water Works (274)**
GLE 0707.7.6 Evaluate how human activities affect the earth's land, oceans, and atmosphere.	**0707.7.9** Evaluate how human activities affect the condition of the earth's land, water, and atmosphere.	**A-maze-ing Water (219)** **A Grave Mistake (311)** **Humpty Dumpty (316)** **Irrigation Interpretation (254)** **No Bellyachers (85)** **Poison Pump (93)** **The Pucker Effect (338)** **Reaching Your Limits (344)** **Sum of the Parts (267)** **Super Bowl Surge (353)** **Super Sleuths (107)** **Water Actions (12)** **Wish Book (460)**

Grade 7: Standard 8-10 – Omitted

Grade 7 : Standard 11 - Motion

Learning Expectations	Checks for Understanding	Project WET Correlations
GLE 0707.11.1 Identify six types of simple machines.	**0707.11.1** Compare the six types of simple machines.	**Energetic Water (242)**

GLE 0707.11.2 Apply the equation for work in experiments with simple machines to determine the amount of force needed to do work.	**0707.11.2** Compete an investigation to determine how machines reduce the amount of force needed to do work.	
GLE 0707.11.3 Distinguish between speed and velocity.	**0707.11.3** Summarize the difference between the speed and velocity based on the distance and amount of time traveled.	**Back to the Future (293)**
GLE 0707.11.4 Investigate how Newton's laws of motion explain an object's movement.	**0707.11.4** Recognize how a net force impacts an object's motion.	**Branching Out! (129)** **Rainy-Day Hike (186)** **wAteR in moTion (450)**
GLE 0707.11.5 Compare and contrast the basic parts of a wave. **GLE 0707.11.6** Investigate the types and fundamental properties of waves.	**0707.11.5** Create a graphic organizer to illustrate and describe the basic parts of a wave. **0707.11.6** Compare how transverse and longitudinal waves are produced and transmitted.	