PEARL RIVER SCHOOL DISTRICT – Secondary Science

Core Instruction

	September	October	November	December	January	February	March	April	May	June	Assess
Grade 8	Forces & Interactions		Energy		Waves & Electromagnetic Radiation		Space Systems		Weather & Climate		NYSED G8 Local Final
Earth Science*	Prologue	Earth's Dimensions	Rocks & Minerals	Dynamic Crust		Weathering & Erosion	Geologic History		Meteorology	Astronomy	Regents
Living Environment	Scientific Method	Biochemistry	Cells	Photosynthesis Respiration	Reproduction Development	Genetics	Evolution		Anatomy & Physiology	Ecology	Regents
Living Environment Honors	Tools of the Scientist	Cells	Biochemistry	Nutrition (Digestion & Photosynthesis	Respiration & Excretion	Transport	Immunity	Regulation	Reproduction	Genetics	Evolution	Ecology & Human Impact on the Environment	Regents
		Independent Science Research Project											
Chemistry*	Lab Techniques / Intro to Chemistry	Matter & Energy	Mole Concept	Gas Behavior	Nomenclature	Math of Chemistry	The Atom	Periodic Table	Bonding	Solutions	Acids, Bases & Salts	Kinetics & Equilibrium	Redox	Nuclear Chemistry	Organic Chemistry	Regents
Active Physics	Problem #1 Driving the Roads	Problem #2 Thrills & Chills	Problem #3 Physics in Action	Problem #4 Safety		Problem #5 Entertainment	Problem #6 Electricity	Problem #7 Toys for Understanding	Problem #8 20 Time							Local Final
Academic Physics SUNY Physics 101	Motion in 1 Dimension	Motion in 2 Dimensions	Laws of Motion	Energy and Momentum	Rotational Motion	Rotational Equilibrium and Dynamics	Fluid Dynamics	Thermo-Dynamics	Waves	Electric Circuits						College (Local) Final
Advanced Physics SUNY Physics 101/102	Motion in 1 & 2 Dimensions	Laws of Motion	Energy and Momentum	Rotational Dynamics and Fluids	Thermo-Dynamic and Waves	Electric Circuits and Capacitance	Electric Circuits and Magnetism	AC Circuits	Light and Optics							College (Local) Final
AP Biology	Molecules and Cells		Genetics and DNA		Evolution and Organisms		Homeostasis, Signaling, and Organ Systems		AP Exam Student Project							

AP Chemistry	Chemical Foundations	Measurement & Stoichiometry	Predicting Reactions	Gases, Liquids, Solids	Thermochemistry & Thermodynamics	Atomics & Periodicity	Bonding & Structure	Organic Chemistry	Solutions & Solubility	Kinetics	Equilibrium	Acids, Bases, & Salts	Electrochemistry	Nuclear	AP Exam Student Project
AP Environmental	The Earth, Ecosystems, Environmental History	Energy and Non-Energy Resources	Climate Change, Ozone, Forests and Deforestation	Human Population and Food Resources	Water and Water Pollution	Land Use, Smart Growth, and Sustainability	Air and Air Pollution	Solid and Hazardous Waste	AP Exam Student Project						
Syracuse Project Advance (PA) Forensics	Introduction and History of Forensic	CSI	Pseudoscience	Serology	DNA	Fingerprints	Hair and Fiber	Anthropology	Medicine	Ecology	Ballistics	Toxicology	Psychology	Spectroscopy and Microscopy	College (Local) Final

*including honors level

Science Electives: Semester Timeframe

Elective	Quarter 1	Quarter 2	Assessment
Marine Science (1st semester)	Humans and the Sea; History of Exploration; Properties of Sea Water; Zones of the Ocean; Marine Ecosystems; Marine Food Webs; Classification of Marine Life; Survey of Life in Oceans; Life Zones of the Ocean	Physical Oceanography; Ocean Circulation; Tides, Currents, Waves, Sea Floor Topography; Exploration; Ocean Pollution; Sea Level Change: Overfishing; Coral Reef Bleaching; Human Impacts/Solutions	Local Final
Fresh Water / Hudson River Ecology (2nd semester)	Earth's Freshwater Budget; Water Cycle; Properties of Freshwater; Freshwater Resources; Domestic and Commercial Use of Water; Water Conservation; Surface Water; Lakes; Rivers; Wetlands; Physical Geography of the Hudson; History of the Hudson; Native Peoples; European Explorers; Revolutionary War; Importance of the River Economically and Ecologically	Hudson Estuary and Arm of the Sea; Fish, Plants and Other Animals of the Hudson; Food Webs; Hudson River Fisheries; Native and Non-native Invaders; Freshwater Pollution, Prevention, and Clean-up; Industrialization and Hudson River Pollution; The Fight to Save the Hudson; Current and Future Concerns; People and Groups Working on Protections	Local Final