MarineLab 3 Day, 2 Night Program

Florida Next Generation Sunshine State Standards - Science, Grade 8

STANDARD / BODY OF KNOWLEDGE / DOMAIN	**FL.SC.8.N.**	**Nature of Science**
BENCHMARK / BIG IDEA / STRAND	**SC.8.N.1.**	The Practice of Science - A: Scientific inquiry is a multifaceted activity; The processes of science include the formulation of scientifically investigable questions, construction of investigations into those questions, the collection of appropriate data, the evaluation of the meaning of those data, and the communication of this evaluation. B: The processes of science frequently do not correspond to the traditional portrayal of "the scientific method." C: Scientific argumentation is a necessary part of scientific inquiry and plays an important role in the generation and validation of scientific knowledge. D: Scientific knowledge is based on observation and inference; it is important to recognize that these are very different things. Not only does science require creativity in its methods and processes, but also in its questions and explanations.
BENCHMARK / DESCRIPTOR / STANDARD	**SC.8.N.1.1.**	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions. *Plankton Tow* *Coral Reef Ecology* *Invertebrate Diversity* *Field Identification of Reef Fish* *Mangrove ecology*
BENCHMARK / DESCRIPTOR / STANDARD	**SC.8.N.1.6.**	Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations and models to make sense of the collected evidence. *Plankton Tow* *Field Identification of Reef Fish* *Mangrove ecology* *Coral Reef Ecology* *Invertebrate Diversity*
STANDARD / BODY OF KNOWLEDGE / DOMAIN	**FL.SC.8.L.**	**Life Science**
BENCHMARK / BIG IDEA / STRAND	**SC.8.L.18.**	Matter and Energy Transformations - A. Living things all share basic needs for life. B. Living organisms acquire the energy they need for life processes through various metabolic pathways (photosynthesis and cellular respiration). C. Matter and energy are recycled through cycles such as the carbon cycle.
BENCHMARK / DESCRIPTOR / STANDARD	**SC.8.L.18.1.**	Describe and investigate the process of photosynthesis, such as the roles of light, carbon dioxide, water and chlorophyll; production of food; release of oxygen. *Seagrass ecology*
BENCHMARK / DESCRIPTOR / STANDARD	**SC.8.L.18.3.**	Construct a scientific model of the carbon cycle to show how matter and energy are continuously transferred within and between organisms and their physical environment. *Mangrove ecology*
BENCHMARK / DESCRIPTOR / STANDARD	**SC.8.L.18.4.**	Cite evidence that living systems follow the Laws of Conservation of Mass and Energy. *Plankton Tow* *Seagrass ecology* *Mangrove ecology*