

Marine Science Quick Planning Guide

Activity Ideas (Complete in School)	Prep and Follow Up Ideas (Complete in School or at Home)
Topic 1: Introduction to Marine Science Course and Nature of Science Standards: SC.912.N.1.1 through SC.912.N.1.7	
• Introduction to class • Safety discussion • UV Beads and the Scientific Method Lab - Students will be creating a lab using UV Beads and miscellaneous items (these items can be given by the teacher or have students bring in the objects). • Graphing Practice - Ocean Basin Depth Analysis - The discussion and review can be done in class. The graphing can be done either in class or at home.	• Lab Safety Challenge from Flinn: Students can watch the video at home and take notes on safety violations. Students then bring back the notes and discuss them as a whole group. • Additional support at home: CPALMS interactive tutorial on Testing Scientific Claims. • Practices of Science/Our Fluid Earth - Students can answer the questions and submit using Google Forms or through a document. • Polar Bears and Sea Life CER
Topic 2: Scientific Theories and Laws (Continental Drift) Standards: SC.912.N.3.1 This unit reviews scientific theories and laws.	
• Scientific Theories and Laws Activity: this whole activity can be used, or parts can be pulled to use as an assessment. • The Topography of Plate Tectonics - this is a full unit lesson that can be completed partially in class and at home.	• CPALMS interactive tutorial on Scientific Laws and Theories • What's The Difference Between A Scientific Law and Theory? - Students can watch video to reinforce the differences of a law and theory
Topic 3: Scientific Models Standards: SC.912.N.3.5 and SC.912.L.17.4 <i>This unit looks at models and changes in ecosystems resulting from seasonal variations, climate change and succession.</i>	
• MBI: Hurricanes - The lesson included in Day 3 allows students to complete a jigsaw for hurricane models • Fault Models for Plate Tectonics Lab • Sea Turtle Sex and Climate Change - CPALMS Activity. This can be done part in class (Sea Turtle Lab) and part at home (Research and follow up questions).	• Hurricane Katrina: A Project Based Learning Model - Students can complete the project at home by research and analysis. • Polar Bears and Climate Change - CPALMS Activity • Paleozoic and Mesozoic Seas - CK-12 Reading about sea levels with questions and review
Topic 4: Properties of water Standards: SC.912.L.17.2 and SC.912.L.18.12 This unit focuses on the special properties of water and the distribution of life.	
• Methods to Determining Salinity Lab - This lab focuses on refraction, specific gravity, and evaporation.	• Ocean Acidification - Jessica Harvey's Expedition Notebook - This video summarizes ocean acidification. It is a good review for students to

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- [Heat Capacity Lab](#) - This lab compares the heat capacity of water and sand.
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- This [Bozeman Science video](#) would be appropriate to show before or after a discussion on the properties of water.

- watch from home.
- [Marine Systems Foldable](#) - Includes directions and template
- [A Whole New World: The Search for Water](#) This activity provides an opportunity for students to collect data from multiple hands-on activities in order to put together a convincing argument on where people of Earth could relocate, in case the planet is not viable in the future. This activity can be modified by the teacher to take into consideration the amount of time needed/available. Some of the data could be provided to aid in cutting down materials needed and time. The activity would work by having the lab portion completed in class and analysis of data done individually.