

What sinks or floats in the Ocean.

Grade Level: 8th

Subject: Physical Science- Density and Buoyancy (Ocean)

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<p>Overview & Purpose</p> <p>How can you use your knowledge of density and buoyancy and apply it to the ocean?</p> <p>Student groups will design and present density and buoyancy concepts dealing with what floats, what sinks examining temperature, certain chemicals, objects and/or water content in the ocean.</p>	<p>Education Standards Addressed –</p> <p>California 8th grade Science standards 8a, 8b, 8c, 8d, 2a, 2b,2c, 2d, 2f, 9a, 9b, 9c, 9d, 9e, 9f, 9g, 9h, 9i,</p> <p>Ocean Literacy The ocean and humans are inextricably linked. The Earth has one big ocean with many features.</p>
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	Teacher Guide	Student Guide	
<p>Objectives (Specify skills/information that will be learned.)</p>	<p>To build a learning culture in classroom to sustain students' enthusiasm for engaging in scientific habits of thinking while learning rigorous science content through standards and ocean literacy.</p>	<p>Students will learn the concepts of density and buoyancy as they are related to the Ocean.</p>	<p>Materials Needed</p> <ul style="list-style-type: none"> • Paper • Pencil • LCD Player • Computer • Poster Paper • Markers • Student notebook • Graph paper
<p>Information (Give and/or demonstrate necessary information)</p>	<p>Teacher will show videos, demonstrations about density and buoyancy, use of internet for data from ocean sensors, field trips, and classroom activities.</p>	<p>Student groups will present researched information about ocean which include density and buoyancy concepts.</p>	
<p>Verification (Steps to check for student understanding)</p>	<p>Teacher will give small quizzes, oral questions, and critique presentations.</p>	<p>Students will take small quizzes, answer oral questions, and final presentation.</p>	<p>Other Resources (e.g. Web, books, etc.)</p>
<p>Activity (Describe the independent activity to reinforce this lesson)</p>	<p>Density and Buoyancy Immersion Unit Show Exxon Valdez Oil Spill – unit 6 Density Demo - Demonstrate salt and fresh water, cold and hot water Field trip – beach trash Computer room – Exploring Ocean Observing systems</p>	<p>Complete all lessons from Immersion Unit. View and take notes from demos. Explore the beach on field trip Collect data from different ocean observing systems</p>	<p>Internet Density-Driven Current Worksheet www.sccwrp.org http://oceans- www.jpl.nasa.gov/ http://www.weather.com/</p>
<p>Summary</p>	<p>Immersion unit lessons 5 and 6</p>	<p>Density and buoyancy in other fluids other than fresh water</p>	<p>Additional Notes</p>