

**Questions used in the beta version of my Ocean Literacy Survey**  
**C. Cudaback, October, 2006**

*Educational Demographics*

<i>Question</i>	<i>Comment</i>
Name	Need to correlate grades with literacy scores
Year: a) Freshman    b) Sophomore c) Junior        d) Senior	
Major:	
Classify your major: a) Science, Technology, Engineering, Math b) Humanities and Social Sciences c) Education d) Other, please explain:	Every university has different colleges; we need a consistent way to group majors. I happen to like education majors, but need to work with other researchers to define these categories better.
What is the main reason you are taking this course? a) introductory oceanography (not other science course) is required for my major b) general education requirement c) simple curiosity	

### *Sources of Information*

<p>Mark the two or three ways you have learned most about the ocean (before this class):</p> <ul style="list-style-type: none"><li>a) formal education: a whole course in ocean science</li><li>b) formal education: just touched on ocean science in other courses</li><li>c) informal education: aquarium, museum, camp</li><li>d) personal experience: actually going to the beach</li><li>e) friends and family: in conversation</li><li>f) media: TV, magazines, etc</li><li>g) other: please explain</li></ul>	<p>Started with an open-ended question, used thematic content analysis to categorize answers (Libarkin &amp; Kurdziel, 2002a)</p>
<p>How often do you visit the beach or shore?</p>	<p>There are kids in inner city Los Angeles who have never seen the ocean (R. Louv, Last Child in the Woods, 2006).</p>
<p>How often do you visit an aquarium, zoo or museum where you might learn about the ocean?</p>	<p>My undergrads haven't been to the local science museum "since middle school", probably implying a field trip.</p>

***Attitudes about the Ocean and Oceanography***

How much do you agree with the following statements? 1 = disagree strongly, 2 = disagree, 3 = neutral, 4 = agree, 5 = agree strongly	5 point Likert scale, based on validation studies for Colorado Learning Attitudes about Science Survey (CLASS, Adams <i>et al</i> , 2006)
My actions can have a significant effect on the health of oceans and coastal areas.	Variant on AAAS opinion survey (AAAS, 2005)
I am familiar with the issues facing the coastal areas in my home state	Variant on Steele et al, 2005
I could write a letter to my congress representative about an issue affecting the ocean.	Confidence to be compared with actual performance on class assignment.
I enjoy discussing the ocean with my friends and family.	A way to estimate how much what we teach is shared with people outside the class
Knowledge in oceanography consists of many disconnected topics.	Previously validated by Adams <i>et al</i> 2006, for physics.
I cannot learn oceanography if the teacher does not explain things well in class.	Ditto
I study oceanography to learn knowledge that will be useful in my life outside of school.	Ditto
The subject of oceanography has little relation to what I experience in the real world.	Ditto
To understand oceanography, I sometimes think about my personal experiences and relate them to the topic being analyzed.	Ditto

***Understanding the Ocean:***

What would the earth be like without an ocean?	Uninhabitable– Essential Principle #4 (COSEE, 2005)
How deep is the ocean, on average? a) 100 yards            b) 1 mile            c) 500 meters d) 4000 meters        e) 20,000 leagues    f) 6000 kilometers	Distractors chosen from open-ended questions (Libarkin & Kurdziel, 2002)
What familiar size or distance is similar to the depth of the ocean?	A higher level in Bloom’s Taxonomy
How much of the Earth is covered with ocean?	Essential Principle #1 (COSEE, 2005)
What fraction of the water on earth is in the ocean?	Ditto
Is the draining of your kitchen sink affected by the earth's rotation?	The Coriolis effect only applies to large slow motions.
What produces most of the earth’s oxygen? a) forests b) plants in the ocean c) both equally	From the Ocean Project Survey (Belden <i>et al</i> , 199abc)
Where is a greater variety of living organisms found? a) on land b) in the ocean c) both equally	Ditto
What causes the <b>most</b> ocean pollution? a) industrial waste b) litter from beaches c) runoff from land	Ditto

*Understanding the Ocean, continued:*

<p>What is the essential nature of barrier islands? a) stasis and stability b) motion and change</p>	<p>A vital question in North Carolina</p>
<p>In general, what is the effect of human attempts to stabilize the shoreline? a) increased erosion b) decreased erosion c) no effect</p>	<p>Essential Principle # 6, (COSEE, 2005)</p>
<p>Name a few ways your actions affect the ocean.</p>	<p>Essential Principle # 6, (COSEE, 2005)</p>