MARINE SCIENCE: The World of Water

FOR SEA: Grades 9 to 12 - Oceanography and Marine Biology

Table of Contents

Intro	duction1	
Cond	ceptual Scheme9	
Mari	ne Aquaria15	CO)
Bibli	ography19	
Succ	cessful Fieldtripping35	
Unit	II: Ocean Currents and the Open O	cean
1.	Creating Currents Demonstrations model how waters of salinity move and layer and how wind drive currents.	differing temperature and
2.	Mapping Ocean Currents Students research and map ocean cur	
3.	Ocean Currents The Ocean Currents reading describes global currents and the importance of	s the causes and patterns of
4.	The Circulation of the Oceans A journal article and word puzzle sum currents.	
5.	Drifting with the R/V Wecoma Students plot real data from drift bott currents off the Oregon coast.	
6.	Observations of Living Plankton Students observe plankton, the usual carried and nourished by ocean curre	ly microscopic organisms
7.	Out of Sight This reading and puzzle explore the in marine food webs.	

8.	Satellite Images
9.	"The Nature of Oceanic Life" - Three Level Guide
10.	Animals of the Open Ocean: Jellyfish and Nematocyst Firing
11.	Sharks!
12.	A Shark Reading
13.	A Shark Study
14.	Fish
15.	How Old Are You?
16.	Marine Mammals
17.	Marine Mammal Adaptations: Blubber Mitt Lab & Staying Warm
18.	Marine Mammal Adaptations: Diving Buoyancy Lab
19.	Marine Mammal Adaptations: Bradycardia - The Diving Response

20.	Marine Mammal Adaptations: Echolocation	505	
21.	Exploiting Marine Mammals51 Students examine case histories of human use and management of marine mammal populations.		
22.	The Scrimshander	547	
23.	Whale Research: The Challenges of Counting and Monitoring a Population of Whales	551	
24.	Whale Research: Orca Photo I.D. Students identify whales by matching photos of orcas with drawings from an orca identification catalogue.	559	
25.	Earth as a Greenhouse	529	
26.	What Comes In? What Goes Out? - An Investigation of Photosynthesis and Respiration in Water Plants	643	
27.	Looking For Carbon Dioxide	549	
28.	Looking For Another Greenhouse Gas: Methane Students learn about and rank sources of methane.	669	
29.	Global Climate Change: What Do the Scientists Say?	6 79	
30.	World Conference on Global Warming	591	