

Appendix D. Correspondence of Chapter Content with National Science Standards

	Microscopy	Properties of Seawater	Classifying Invertebrates	Observing & Describing Organisms	Marine Microbiology	Antimicrobial effects	Observing Plankton	Pollution Effects on Phytoplankton	Phycology	Zoology: Porifera	Zoology: Cnidaria	Cephalopod Adaptations	Zoology: Arthropods	Zoology; Echinoderms	Ichthyology	Physiology of Ectotherms	Marine Mammals	Oceanography	Fouling Community	Rocky Intertidal zone	Beach Studies	Ornithology
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Unifying Concepts & Processes

Systems, order, and organization	●	●	●				●	●				●				●	●	●	●	●	●	●
Evidence, models, and explanation	●	●	●		●	●	●	●		●						●	●	●		●		
Constancy, change, and measurement	●	●	●	●		●	●	●		●	●			●	●		●	●	●	●	●	●
Form and function			●	●			●		●	●	●	●	●	●	●		●	●		●	●	●
Evolution and equilibrium			●							●	●	●	●		●		●		●	●	●	

Science as Inquiry

Abilities necessary to do scientific inquiry	●	●	●	●		●		●						●		●						
Understandings about scientific inquiry							●	●														

Physical Science

Structure and properties of matter		●				●		●										●				
Chemical reactions					●	●		●								●		●			●	
Motions and forces							●								●							
Interactions of energy and matter								●	●									●		●	●	

Life Science

The cell					●	●	●	●	●	●	●	●	●	●				●				
Molecular basis of heredity														●								
Biological evolution			●				●		●	●	●	●	●	●	●		●					●

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Earth & Space Science

Geochemical cycles		●														●			●	
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Science & Technology

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Science in Personal & Social Perspectives

[illegible]

History & Nature of Science

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Appendix D: Skills-based Grid

	Microscopy	Properties of Seawater	Classifying Invertebrates	Observing & Describing	Marine Microbiology	Antimicrobial effects	Observing Plankton	Pollution Effects on Phytoplankton	Phycology	Zoology: Porifera	Zoology: Cnidaria	Cephalopod Adaptations	Zoology: Arthropods	Zoology; Echinoderms	Ichthyology	Physiology of Ectotherms	Marine Mammals	Oceanography	Fouling Community	Rocky Intertidal zone	Beach Studies	Ornithology
Analyzes data		●					●	●		●			●	●		●	●	●	●	●	●	
Asks questions		●	●			●		●								●						
Classifies events												●		●		●	●					●
Classifies objects			●		●		●		●	●	●		●		●		●		●	●	●	●
Communicates with others		●	●	●	●	●						●			●	●	●	●	●	●	●	●
Computes and calculates	●	●					●	●		●						●	●	●	●	●	●	
Controls variables					●	●		●						●		●	●					
Designs an experiment						●		●						●		●						●
Makes diagrams or sketches to explain ideas			●		●		●		●	●	●	●	●	●	●				●	●	●	●
Derives explanations from evidence		●		●		●		●		●	●	●	●	●	●	●	●	●		●	●	
Interprets graphs to formulate simple hypotheses		●						●								●	●		●	●	●	
Makes inferences	●							●			●	●	●		●	●	●	●			●	
Makes predictions	●	●		●	●	●		●				●	●		●	●	●					
Measures or estimates data	●	●	●	●		●		●		●	●				●	●	●	●	●	●	●	●
Organizes data into tabular form	●	●	●		●		●	●	●		●		●	●	●	●	●	●	●	●	●	
Reads and interprets graphical forms of data		●					●	●									●		●	●	●	
Records observations	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●	●
Sorts objects			●	●					●		●							●	●	●	●	

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