

NSES cross-reference chart, grades 9-12

Content Standards	Unit 1 The Ocean Basins						Unit 2 Ocean Currents					Unit 3 Ocean-Atmosphere Interactions					Unit 4 Marine Productivity				
	1.1	1.2	1.3	1.4	1.5	1.6	2.1	2.2	2.3	2.4	2.5	3.1	3.2	3.3	3.4	3.5	4.1	4.2	4.3	4.4	4.5
Unifying Concepts and Processes																					
System, order, and organization	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Evidence, models, and explanation	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Constancy, change, and measurement	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Evolution and equilibrium	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X
Form and function			X	X	X		X		X												
Science as Inquiry																					
Abilities necessary to do scientific inquiry	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Understanding about scientific inquiry	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Earth and Space Science																					
Energy in the Earth system			X		X	X	X	X	X	X	X	X	X	X	X	X	.	X	X		.
Geochemical cycles		X	X		X														X		
Origin and evolution of the Earth system	X	X	X	X	X	X	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Origin and evolution of the universe																					
Physical Science																					
Structure of atoms			X																		
Structure and properties of matter			X		X				X	X	X		X	X	X			X	X		
Chemical reactions			X														X	X	X		.
Motions and forces	X	X	X		X	X	X	X	X	X	X	X	X	X	X			X	X		
Conservation of energy and increase in disorder			X		X	X	X	X	X	X	X	X	X	X	X			X			
Interactions of energy and matter			X				X	X	X	X	X	X	X	X	X	X	X	X	X	.	
Life Science																					
The cell																	X	X	X		
Molecular basis of heredity																					
Biological evolution																	.	.	.		.
Interdependence of organisms																	X	X	X	.	X
Matter, energy, and organization in living systems																	X	X	X		X
Behavior of organisms																	X				.
Science and Technology																					
Abilities of technological design	X	X		X	X		X		X	X	X	X		X	X		X	X	X	X	
Understandings about science and technology	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
Science in Personal and Social Perspectives																					
Personal and community health																	X	X		X	X
Population growth																				X	X
Natural resources											X		X				X	X	X	X	X
Environmental quality																			X	X	X
Natural and human-induced hazards											X		X	X	X			X	X	X	
Science and technology in local, national, and global challenges											X		X	X	X	X	X	X	X	X	
History and Nature of Science																					
Science as a human endeavor	X	X	X	X	X		X	X	X		X	X		X	X	X	X	X	X	X	X
Nature of scientific knowledge	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	X
Historical perspectives	X	X	X	X	X	X	X				X	X		X	X				X	X	

X = standard is directly addressed . = underlying concept