



# Physical Science with Earth Science

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STANDARDS	PAGE REFERENCES
<b>Standard A: Science Connections</b>	
<b>By the end of grade twelve, students will:</b>	
<p>A.12.1 Apply the underlying themes of science to develop defensible visions of the future</p>	<p><b>Student Edition:</b> 38-45, 46-50, 52-57, 227-229, 238-241 <i>Design Your Own LAB</i> 344-345 <i>Model and Invent LAB</i> 840-841 <i>National Geographic</i> 44, 368 <i>Science and Society</i> 178, 510, 678, 778 <i>Traditional LAB</i> 51, 230</p> <p><b>Teacher Wraparound Edition:</b> DI 44; R 50</p>
<p>A.12.2 Show how conflicting assumptions about science themes lead to different opinions and decisions about evolution, health, population, longevity, education, and use of resources, and show how these opinions and decisions have diverse effects on an individual, a community, and a country, both now and in the future</p>	<p><b>Student Edition:</b> 42-45, 46-50, 238-241, 535-539 <i>Design Your Own LAB</i> 344-345 <i>National Geographic</i> 44 <i>Science and History</i> 382 <i>Science and Society</i> 510 <i>Traditional LAB</i> 51</p> <p><b>Teacher Wraparound Edition:</b> A 48; CU 241; DI 44; FYI 538; IM 43; PR 12, 539</p>

STANDARDS	PAGE REFERENCES
<p>A.12.3 Give examples that show how partial systems, models, and explanations are used to give quick and reasonable solutions that are accurate enough for basic needs</p>	<p><b>Student Edition:</b>            11-13, 22-26, 42-43, 54-57  <i>Accidents in Science</i> 60-61  <i>Design Your Own LAB</i> 28-29  <i>National Geographic</i> 66-67, 168, 582, 684-685  <i>Science and Language Arts</i> 30  <i>Traditional LAB</i> 51</p> <p><b>Teacher Wraparound Edition:</b>            CC 39; LD 54; VL 23, 48, 55</p>
<p>A.12.4 Construct arguments that show how conflicting models and explanations of events can start with similar evidence</p>	<p><b>Student Edition:</b>            45, 206-207, 225-226, 238-241, 354-361, 535-539  <i>Accidents in Science</i> 210  <i>Integrate History</i> 218-219  <i>Science and History</i> 120  <i>Science and Society</i> 510  <i>Traditional LAB</i> 230</p> <p><b>Teacher Wraparound Edition:</b>            CC 495; FYI 82; PR 50; RS 49</p>
<p>A.12.5 Show how the ideas and themes of science can be used to make real-life decisions about careers, work places, life-styles, and use of resources</p>	<p><b>Student Edition:</b>            38-45, 42-43, 46-50, 497-499, 501-506  <i>Integrate Career</i> 56, 408, 440, 472, 592, 753  <i>Integrate Environment</i> 48, 561, 668  <i>Integrate Life Science</i> 54  <i>Traditional LAB</i> 51  <i>Use the Internet LAB</i> 508-509</p> <p><b>Teacher Wraparound Edition:</b>            DI 44; R 50; SJ 55</p>
<p>A.12.6 Identify and, using evidence learned or discovered, replace inaccurate personal models and explanations of science-related events</p>	<p><b>Student Edition:</b>            12, 110-111, 218-219, 492-493  <i>Accidents in Science</i> 210  <i>Science and History</i> 146</p> <p><b>Teacher Wraparound Edition:</b>            IM 43, 72, 82, 142, 163, 193, 226, 289, 403, 618</p>

STANDARDS	PAGE REFERENCES
<p>A.12.7 Re-examine the evidence and reasoning that led to conclusions drawn from investigations, using the science themes</p>	<p><b>Student Edition:</b>            7-10, 54-57  <i>Applying Science</i> 13, 586  <i>Integrate Astronomy</i> 105  <i>Integrate History</i> 49  <i>Mini LAB</i> 131  <i>Model and Invent LAB</i> 176-177, 840-841  <i>Science Skill Handbook</i> 857-858  <i>Traditional LAB</i> 27, 51, 87, 175, 742-743</p> <p><b>Teacher Wraparound Edition:</b>            FYI 48; IL 12</p>
<p><b>Standard B: Nature of Science</b></p>	
<p><b>By the end of grade twelve, students will:</b></p>	
<p>B.12.1 Show how cultures and individuals have contributed to the development of major ideas in the earth and space, life and environmental, and physical sciences</p>	<p><b>Student Edition:</b>            98, 218-219, 240-241, 354-361, 581-583, 588-589, 721-724  <i>Integrate Physics</i> 220  <i>National Geographic</i> 548-549  <i>Science and History</i> 120, 312, 478, 810  <i>Science and Society</i> 178</p> <p><b>Teacher Wraparound Edition:</b>            CD 132, 187, 236, 336; FYI 99, 296, 580</p>
<p>B.12.2 Identify the cultural conditions that are usually present during great periods of discovery, scientific development, and invention</p>	<p><b>Student Edition:</b>            46-50, 203-207, 218-220, 501-506, 581, 588-596, 721-722, 836-839  <i>Integrate History</i> 273  <i>National Geographic</i> 582  <i>Science and History</i> 120, 312, 810  <i>Science and Society</i> 510</p> <p><b>Teacher Wraparound Edition:</b>            AIL 344; CC 722; CD 187; FYI 488, 803; TPK 494</p>
<p>B.12.3 Relate the major themes of science to human progress in understanding science and the world</p>	<p><b>Student Edition:</b>            48-50, 81-86, 104-111, 218-220, 358-361, 581, 588-596, 608-609, 630-635, 721-722, 836-839  <i>National Geographic</i> 582  <i>Science and History</i> 120, 478, 810  <i>Science and Society</i> 178, 510  <i>Traditional LAB</i> 51</p> <p><b>Teacher Wraparound Edition:</b>            D 49; FYI 82; TC 96</p>

STANDARDS	PAGE REFERENCES
<p>B.12.4 Show how basic research and applied research contribute to new discoveries, inventions, and applications</p>	<p><b>Student Edition:</b>            42-43, 52-57, 325-326, 333-337, 401-403, 407-413, 431-440, 469-475  <i>Accidents in Science</i> 60, 210  <i>Integrate History</i> 273  <i>National Geographic</i> 44, 368  <i>Science and History</i> 120, 312, 448, 810  <i>Science and Society</i> 178  <b>Teacher Wraparound Edition:</b>            AIL 344; CD 187; FYI 53, 803; IL 322; TPK 494</p>
<p>B.12.5 Explain how science is based on assumptions about the natural world and themes that describe the natural world</p>	<p><b>Student Edition:</b>            104-111, 218-220, 358-369, 370-378, 462, 588-596, 608-609, 630-635, 836-839  <i>Integrate Earth Science</i> 427  <i>National Geographic</i> 582  <i>Science and History</i> 120, 382, 478, 810  <i>Science and Society</i> 178  <i>Traditional LAB</i> 51  <b>Teacher Wraparound Edition:</b>            CC 377; D 466; FF 366; FYI 82, 460; QD 371</p>
<p><b>Standard C: Science Inquiry</b></p>	
<p><b>By the end of grade twelve, students will:</b></p>	
<p>C.12.1 When studying science content, ask questions suggested by current social issues, scientific literature, and observations* of phenomena, build hypotheses that might answer some of these questions, design possible investigations*, and describe results that might emerge from such investigations</p>	<p><b>Student Edition:</b>            6-10, 39, 42-45, 46-50  <i>Design Your Own LAB</i> 344-345  <i>Integrate Earth Science</i> 11  <i>Science Skill Handbook</i> 850-858  <i>Traditional LAB</i> 51, 230, 653  <i>Use the Internet LAB</i> 508-509  <b>Teacher Wraparound Edition:</b>            IL 12; QD 10; SJ 11</p>
<p>C.12.2 Identify* issues from an area of science study, write questions that could be investigated*, review previous research on these questions, and design and conduct responsible and safe investigations to help answer the questions</p>	<p><b>Student Edition:</b>            6-10, 139-143, 190-195, 197-202  <i>Design Your Own LAB</i> 242-243, 446-447, 568-569  <i>National Geographic</i> 138, 205  <i>Science and History</i> 146  <i>Traditional LAB</i> 196  <b>Teacher Wraparound Edition:</b>            FF 140; FYI 199, 204; IL 12</p>

STANDARDS	PAGE REFERENCES
<p>C.12.3 Evaluate* the data collected during an investigation*, critique the data-collection procedures and results, and suggest ways to make any needed improvements</p>	<p><b>Student Edition:</b>            8-10, 14-21, 22-26, 54-56, 74-75  <i>Design Your Own LAB</i> 88-89, 242-243, 568-569  <i>Math Skill Handbook</i> 868, 874-876  <i>Science Skill Handbook</i> 857-858  <i>Traditional LAB</i> 27</p> <p><b>Teacher Wraparound Edition:</b>            CU 26; DI 10; VL 74</p>
<p>C.12.4 During investigations*, choose the best data-collection procedures and materials available, use them competently, and calculate the degree of precision of the resulting data</p>	<p><b>Student Edition:</b>            8-10, 14-21  <i>Design Your Own LAB</i> 88-89, 344-345, 568-569  <i>Math Skill Handbook</i> 868, 874  <i>Model and Invent LAB</i> 176-177  <i>Science Skill Handbook</i> 854-857  <i>Traditional LAB</i> 51, 775</p> <p><b>Teacher Wraparound Edition:</b>            FYI 16; QD 41; USW 10</p>
<p>C.12.5 Use the explanations* and models* found in the earth and space, life and environmental, and physical sciences to develop likely explanations* for the results of their investigations*</p>	<p><b>Student Edition:</b>            38-45  <i>Design Your Own LAB</i> 88-89, 568-569  <i>Integrate Astronomy</i> 324  <i>Integrate Earth Science</i> 293, 496, 565  <i>Integrate Environment</i> 466  <i>Integrate Life Science</i> 428, 774  <i>Model and Invent LAB</i> 840-841  <i>Traditional LAB</i> 51, 112, 134, 379</p> <p><b>Teacher Wraparound Edition:</b>            CC 39; FYI 48</p>
<p>C.12.6 Present the results of investigations* to groups concerned with the issues, explaining* the meaning and implications of the results, and answering questions in terms the audience can understand</p>	<p><b>Student Edition:</b>            22-26  <i>Design Your Own LAB</i> 88-89  <i>Math Skill Handbook</i> 868, 874-876  <i>Model and Invent LAB</i> 176-177  <i>Science Skill Handbook</i> 858  <i>Traditional LAB</i> 27, 112, 196, 278-279, 507, 616, 676-677, 775  <i>Use the Internet LAB</i> 508-509</p> <p><b>Teacher Wraparound Edition:</b>            CYD 89, 177, 196, 279, 507, 509, 616, 677, 775</p>

STANDARDS	PAGE REFERENCES
<p>C.12.7 Evaluate* articles and reports in the popular press, in scientific journals, on television, and on the Internet, using criteria related to accuracy, degree of error, sampling, treatment of data, and other standards of experimental design</p>	<p><b>Student Edition:</b>            22-26, 40-41  <i>National Geographic</i> 368  <i>Science and Society</i> 178, 510, 778  <i>Science Skill Handbook</i> 850  <i>Traditional LAB</i> 51  <i>Use the Internet LAB</i> 476-477, 508-509</p> <p><b>Teacher Wraparound Edition:</b>            A 23, 41; AIL 28; CB 178; TPK 22</p>
<p><b>Standard D: Physical Science</b></p>	
<p><b>By the end of grade twelve, students will:</b></p>	
<p><b>STRUCTURE OF ATOMS AND MATTER</b></p>	
<p>D.12.1 Describe* atomic structure and the properties of atoms, molecules, and matter during physical and chemical interactions*</p>	<p><b>Student Edition:</b>            562-567, 579-581, 583, 586-587, 592-594, 694-696, 700-702, 720-725, 771-774, 786-790, 791-795</p> <p><i>Design Your Own LAB</i> 568-569  <i>National Geographic</i> 582  <i>Traditional LAB</i> 742-743, 775</p> <p><b>Teacher Wraparound Edition:</b>            D 695; DI 592; FYI 585; VL 586</p>
<p>D12.2 Explain* the forces that hold the atom together and illustrate* how nuclear interactions* change the atom</p>	<p><b>Student Edition:</b>            787-788, 791-793, 801-803</p> <p><i>Applying Math</i> 798  <i>Integrate Chemistry</i> 804  <i>Mini LAB</i> 789  <i>Model and Invent LAB</i> 808-809  <i>Science and History</i> 810  <i>Traditional LAB</i> 807</p> <p><b>Teacher Wraparound Edition:</b>            CU 795; D 793; FYI 787, 803; QD 802</p>

STANDARDS	PAGE REFERENCES
D.12.3 Explain* exchanges of energy* in chemical interactions* and exchange of mass and energy in atomic/nuclear reactions	<p><b>Student Edition:</b>            720-722, 730-733, 734-740, 788-789, 791-793, 801-806  <i>Integrate Chemistry</i> 804  <i>Model and Invent LAB</i> 808-809  <i>Science and History</i> 810  <i>Traditional LAB</i> 807</p> <p><b>Teacher Wraparound Edition:</b>            CD 788; CU 729; D 793; DI 721; FYI 803; LD 736; MM 732; R 740, 806; SJ 802</p>
<b>CHEMICAL REACTIONS</b>	
D.12.4 Explain* how substances, both simple and complex, interact* with one another to produce new substances	<p><b>Student Edition:</b>            688-692, 700-702, 720, 723-725, 726-727, 730-733, 768-769  <i>Accidents in Science</i> 60, 712, 744  <i>Applying Math</i> 728  <i>Launch Lab</i> 719</p> <p><b>Teacher Wraparound Edition:</b>            CD 738; DI 721; QD 691, 722, 731, 769; R 774; TC 718; TPK 720</p>
D.12.5 Identify* patterns in chemical and physical properties and use them to predict* likely chemical and physical changes and interactions	<p><b>Student Edition:</b>            560-566, 588-591, 608-614, 690-692, 694-702, 730-733, 755-758, 771-774  <i>Design Your Own LAB</i> 568-569  <i>Traditional LAB</i> 616, 636-637</p> <p><b>Teacher Wraparound Edition:</b>            A 563, 610, 696; CD 565; FYI 612; IL 564; LD 562</p>
D.12.6 Through investigations*, identify* the types of chemical interactions*, including endothermic, exothermic, oxidation, photosynthesis, and acid/base reactions	<p><b>Student Edition:</b>            648-649, 730-733, 735-738, 768-770  <i>Integrate Life Science</i> 774, 827  <i>Launch Lab</i> 719  <i>Science and Society</i> 778  <i>Traditional LAB</i> 775</p> <p><b>Teacher Wraparound Edition:</b>            D 723; LD 537, 736; QD 691, 769; R 733; TPK 720, 730</p>

STANDARDS	PAGE REFERENCES
<b>MOTIONS AND FORCES</b>	
D.12.7 Qualitatively and quantitatively analyze* changes in the motion of objects and the forces that act on them and represent analytical data both algebraically and graphically	<p><b>Student Edition:</b> 70-75, 76-80, 81-86, 98-103, 105-111, 113-117 <i>Design Your Own LAB</i> 88-89 <i>Launch Lab</i> 69 <i>National Geographic</i> 115 <i>Traditional LAB</i> 87, 112, 118-119</p> <p><b>Teacher Wraparound Edition:</b> A 85; CD 72; D 77; DI 78, 100; IM 74, 82, 116; LD 102; QD 73; TPK 98</p>
D.12.8 Understand* the forces of gravitation, the electromagnetic force, intermolecular force, and explain* their impact on the universal system	<p><b>Student Edition:</b> 104-111, 132-133, 424-427, 439-440 <i>Design Your Own LAB</i> 446-447 <i>Launch Lab</i> 97 <i>Science and History</i> 120 <i>Traditional LAB</i> 112</p> <p><b>Teacher Wraparound Edition:</b> DI 106; FF 105; FYI 107, 787; UA 425</p>
D.12.9 Describe* models* of light, heat, and sound and through investigations* describe* similarities and differences in the way these energy* forms behave	<p><b>Student Edition:</b> 257, 266-270, 272-276, 290-291, 320-324, 327-330, 331-337, 462-465 <i>Design Your Own LAB</i> 344-345 <i>Launch Lab</i> 287, 485 <i>National Geographic</i> 684-685 <i>Science and History</i> 478 <i>Traditional LAB</i> 271, 278-279, 338</p> <p><b>Teacher Wraparound Edition:</b> DI 274; FYI 296, 322, 328; IM 256, 321; QD 268, 465; TC 318</p>
<b>CONSERVATION OF ENERGY AND THE INCREASE IN DISORDER</b>	
D.12.10 Using the science themes*, illustrate* the law of conservation of energy* during chemical and nuclear reactions	<p><b>Student Edition:</b> 135-136, 141-143, 734, 801-803 <i>Integrate Environment</i> 139</p> <p><b>Teacher Wraparound Edition:</b> IM 142</p>

STANDARDS	PAGE REFERENCES
<b>INTERACTIONS OF MATTER AND ENERGY</b>	
D.12.11 Using the science themes*, explain* common occurrences in the physical world	<p><b>Student Edition:</b>  105-107, 110-111, 190-195, 197-202, 218-222, 330, 358-361, 373-376  <i>Integrate Earth Science</i> 293  <i>Integrate Environment</i> 139  <i>Integrate History</i> 377  <i>National Geographic</i> 292, 397, 531, 666  <i>Science and History</i> 120, 382</p> <p><b>Teacher Wraparound Edition:</b>  FYI 82; SJ 564; TPK 218</p>
D.12.12 Using the science themes* and knowledge of chemical, physical, atomic, and nuclear interactions*, explain* changes in materials, living things, earth's features, and stars	<p><b>Student Edition:</b>  354-361, 373-378, 466, 489-491, 494-500, 562-566, 620-623, 634-635, 720-725, 823-825  <i>Accidents in Science</i> 60, 712, 744  <i>National Geographic</i> 292, 488, 531, 633, 666  <i>Science and History</i> 382, 600  <i>Science and Society</i> 638, 778  <i>Traditional LAB</i> 51, 379, 741</p> <p><b>Teacher Wraparound Edition:</b>  FYI 360; IM 356; SJ 564</p>
<b>Standard E: Earth and Space Science</b>	
<b>By the end of grade twelve, students will:</b>	
<b>ENERGY IN THE EARTH SYSTEM</b>	
E. 12.1 Using the science themes*, distinguish between internal energies* (decay of radioactive isotopes, gravity) and external energies (sun) in the earth's systems and show* how these sources of energy have an impact on those systems	<p><b>Student Edition:</b>  269, 272-277, 356-361, 362-369, 370-372, 373-378, 791-795, 801-803, 824-827  <i>National Geographic</i> 268, 397, 488, 737  <i>Science and History</i> 120, 382, 478, 810  <i>Science and Society</i> 510, 678</p> <p><b>Teacher Wraparound Edition:</b>  CB 280; FYI 360; IM 269</p>

STANDARDS	PAGE REFERENCES
<b>GEOCHEMICAL CYCLES</b>	
<p>E.12.2 Analyze* the geochemical and physical cycles of the earth and use them to describe* movements of matter</p>	<p><b>Student Edition:</b>            358-361, 373-378, 522, 536-537, 620-623, 628-629, 630-632, 634-635, 646-652, 654-662, 663-668  <i>National Geographic</i> 633  <i>Traditional LAB</i> 379  <b>Teacher Wraparound Edition:</b>            CU 522; D 658, 660; FYI 537, 634</p>
<b>THE ORIGIN AND EVOLUTION OF THE EARTH SYSTEM</b>	
<p>E.12.3 Using the science themes*, describe* theories of the origins and evolution* of the universe and solar system, including the earth system* as a part of the solar system, and relate* these theories and their implications to geologic time on earth</p>	<p><b>Student Edition:</b>            188, 206-207, 221, 226, 231, 238-241, 669-675, 823-825, 827-829, 833-835, 836-839  <i>Integrate Chemistry</i> 228  <i>Model and Invent LAB</i> 840-841  <i>National Geographic</i> 205, 826  <i>Traditional LAB</i> 230, 676-677, 830  <b>Teacher Wraparound Edition:</b>            A 838; CB 204; CU 839; FF 203; FYI 191, 240; LD 226; R 222, 522; TPK 669, 836; UA 833; VL 206, 221, 227</p>
<p>E.12.4 Analyze* the benefits, costs, and limitations of past, present, and projected use of resources and technology and explain* the consequences to the environment</p>	<p><b>Student Edition:</b>            45, 139, 490-493, 494-499, 501-506, 522  <i>Integrate Astronomy</i> 842  <i>Integrate Chemistry</i> 164, 402  <i>Integrate Environment</i> 48, 466, 561, 667  <i>Integrate Health</i> 307  <i>Integrate History</i> 49  <i>National Geographic</i> 44  <i>Science and Society</i> 510  <i>Traditional LAB</i> 507  <i>Use the Internet LAB</i> 508-509  <b>Teacher Wraparound Edition:</b>            D 499; DI 492, 498; FYI 519; IL 490; IM 497; PR 500</p>

STANDARDS	PAGE REFERENCES
<b>THE ORIGIN AND EVOLUTION OF THE UNIVERSE</b>	
<p>E.12.5 Using the science themes*, understand* that the origin of the universe is not completely understood, but that there are current ideas in science that attempt to explain its origin</p>	<p><b>Student Edition:</b>            221, 823-825, 827-829, 833-835, 836-839  <i>Model and Invent LAB</i> 840-841  <i>National Geographic</i> 826  <i>Traditional LAB</i> 830  <b>Teacher Wraparound Edition:</b>            A 838; CU 839; TPK 836; UA 833</p>
<b>Standard G: Science Applications</b>	
<b>By the end of grade twelve, students will:</b>	
<p>G.12.1 Identify personal interests in science and technology, implications that these interests might have for future education, and decisions to be considered</p>	<p><b>Student Edition:</b>            6-7, 13, 38-45, 46-50, 52-57  <i>Integrate Astronomy</i> 105, 261  <i>Integrate Career</i> 408, 440, 472, 592, 753  <i>Integrate Earth Science</i> 11  <i>Launch Lab</i> 37  <b>Teacher Wraparound Edition:</b>            R 57</p>
<p>G.12.2 Design, build, evaluate, and revise models and explanations related to the earth and space, life and environmental, and physical sciences</p>	<p><b>Student Edition:</b>            11, 55, 193-195, 201-202, 206-207, 218-219, 400-401  <i>Accidents in Science</i> 210  <i>Design Your Own LAB</i> 344-345  <i>Integrate Physics</i> 30  <i>Mini LAB</i> 525  <i>Model and Invent LAB</i> 176-177, 710-711, 808-809, 840-841  <i>Science and History</i> 120, 478, 810  <i>Science and Society</i> 178  <i>Traditional LAB</i> 196, 468  <b>Teacher Wraparound Edition:</b>            AIM 208; D 11; VL 55</p>

STANDARDS	PAGE REFERENCES
<p>G.12.3 Analyze the costs, benefits, or problems resulting from a scientific or technological innovation, including implications for the individual and the community</p>	<p><b>Student Edition:</b>  48-50, 203-206, 275-276, 325-326, 438-444, 469-475, 486-493, 494-499, 501-506  <i>Accidents in Science</i> 60, 712, 744  <i>National Geographic</i> 115  <i>Science and History</i> 312, 448  <i>Science and Society</i> 178, 510  <i>Use the Internet LAB</i> 508-509  <b>Teacher Wraparound Edition:</b>  A 492, 498; CC 489; D 506; FYI 48, 442, 803; IM 497; PR 493; SJ 802</p>
<p>G.12.4 Show how a major scientific or technological change has had an impact on work, leisure, or the home</p>	<p><b>Student Edition:</b>  38-45, 100-101, 275-277, 336-337, 409-413, 438-440, 442-444, 469-470, 472-475, 491-493  <i>Accidents in Science</i> 60, 712, 744  <i>Integrate Earth Science</i> 11  <i>National Geographic</i> 2-3, 44, 441, 471  <i>Science and History</i> 448  <b>Teacher Wraparound Edition:</b>  A 275; D 101</p>
<p>G.12.5 Choose a specific problem in our society, identify alternative scientific or technological solutions to that problem and argue its merits</p>	<p><b>Student Edition:</b>  486-493, 494-499, 501-506  <i>Launch Lab</i> 485  <i>Science and Society</i> 510  <i>Use the Internet LAB</i> 508-509  <b>Teacher Wraparound Edition:</b>  A 498; CC 495; D 499, 506; FF 504; FYI 490; IM 503; SJ 802; TC 484</p>
<p><b>Standard H: Science in Personal and Social Perspectives</b></p>	
<p><b>By the end of grade twelve, students will:</b></p>	
<p>H.12.1 Using the science themes and knowledge of the earth and space, life and environmental, and physical sciences, analyze the costs, risks, benefits, and consequences of a proposal concerning resource management in the community and determine the potential impact of the proposal on life in the community and the region</p>	<p><b>Student Edition:</b>  522, 654-657, 663-665, 667-668  <i>National Geographic</i> 666  <i>Science and Society</i> 678  <b>Teacher Wraparound Edition:</b>  CU 522; DI 667; LD 665; PR 668</p>

STANDARDS	PAGE REFERENCES
<p>H.12.2 Evaluate proposed policy recommendations (local, state, and/or national) in science and technology for validity, evidence, reasoning, and implications, both short and long-term</p>	<p><b>Student Edition:</b>  45, 50  <i>Applying Science</i> 49  <i>Integrate Environment</i> 48  <b>Teacher Wraparound Edition:</b>  A 48, DI 44; R 50</p>
<p>H.12.3 Show how policy decisions in science depend on social values, ethics, beliefs, and time-frames as well as considerations of science and technology</p>	<p><b>Student Edition:</b>  45, 50  <i>Applying Science</i> 49  <i>Integrate Environment</i> 48  <b>Teacher Wraparound Edition:</b>  A 48; CU 50; DI 44; FYI 48, 53</p>
<p>H.12.4 Advocate a solution or combination of solutions to a problem in science or technology</p>	<p><b>Student Edition:</b>  218-219, 354-361  <i>Applying Science</i> 428, 499, 586  <i>National Geographic</i> 66-67, 368  <i>Science and History</i> 312  <b>Teacher Wraparound Edition:</b>  A 355; FYI 360</p>
<p>H.12.5 Investigate how current plans or proposals concerning resource management, scientific knowledge, or technological development will have an impact on the environment, ecology, and quality of life in a community or region</p>	<p><b>Student Edition:</b>  522, 654-657, 663-665, 667-668  <i>Integrate Social Studies</i> 799  <i>Science and Society</i> 678  <b>Teacher Wraparound Edition:</b>  CU 522; DI 667; LD 665; PR 668</p>
<p>H.12.6 Evaluate data and sources of information when using scientific information to make decisions</p>	<p><b>Student Edition:</b>  8-10, 22-26, 48-49  <i>Applying Science</i> 499, 586  <i>Math Skill Handbook</i> 868  <i>Science Skill Handbook</i> 850-853  <i>Traditional LAB</i> 27, 51  <i>Use the Internet LAB</i> 508-509  <b>Teacher Wraparound Edition:</b>  DI 10</p>

STANDARDS	PAGE REFERENCES
<p>H.12.7 When making decisions, construct a plan that includes the use of current scientific knowledge and scientific reasoning</p>	<p><b>Student Edition:</b>            8-10, 48-49, 54-57  <i>Applying Science</i> 499, 586  <i>Design Your Own LAB</i> 242-243, 540-541, 568-569  <i>Model and Invent LAB</i> 176-177  <i>Science Skill Handbook</i> 850-853  <i>Traditional LAB</i> 27, 51, 379, 380-381  <i>Use the Internet LAB</i> 508-509</p> <p><b>Teacher Wraparound Edition:</b>            A 48; DI 10; QD 55</p>