



FLORIDA Standards Correlations



Component Codes

ACT-A, ACT-B: Chapter Activity A/B	PTT: Posttest
CA: Chapter Assessment	SF: Science Focus
CI: Chapter Investigation	TC: Thinking Critically
CS: Case Study	TIAT: Tying It All Together
EAW: Explorers at Work	U: Unit
EF: Engineering Focus	UEP: Unit Engineering Project
LA: Lesson Assessment	UO: Unit Opener

Bold blue numbers indicate chapters or sections.
 Breakouts that are teacher-facing only are indicated with an asterisk (*).

Next Generation Sunshine State Standards (NGSSS) Correlations for Environmental Science FL1

Additional Standards for Environmental Science FL9

Next Generation Sunshine State Standards

ENVIRONMENTAL SCIENCE		
STANDARD	STUDENT/TEACHER EDITION	ONLINE RESOURCES
SC.912.E.6.6 Analyze past, present, and potential future consequences to the environment resulting from various energy production technologies.	3 CA p. 99 #32; 9 EAW p. 282 TC; 12.2 p. 397, pp. 400–401, pp. 403–407; 12.3 pp. 410–411, pp. 413–415; 13.2 pp. 433–434, pp. 436–437, pp. 440–449; 13.2 LA p. 449 #2–4; 13.3 p. 449, p. 451; 18.1 p. 620; 18.1 LA p. 620 #2, #5; 18.2 LA p. 625 #1	
SC.912.E.7.4* Summarize the conditions that contribute to the climate of a geographic area, including the relationships to lakes and oceans.	4.4 SF p. 126; 6.1 pp. 161–164, p. 166; 6.1 LA p. 166 #1–6; 6.2 p. 170, p. 172, p. 175, p. 178; 6.2 LA p. 179 #1, #4, #5; 6.3 pp. 180–181; 6.4 pp. 186–187; 6 CA pp. 192–193 #5, #14–16, #27	6 PTT #1–4, #8, #9
SC.912.E.7.7 Identify, analyze, and relate the internal (Earth system) and external (astronomical) conditions that contribute to global climate change.	2.3 p. 58; 3.4 p. 87; 3 CA p. 98 #20; 6.1 pp. 161–164, p. 166; 6.1 LA p. 166 #2, #3; 6 CA p. 193 #27; 7.2 p. 228; 16.2 pp. 550–551; 16.2 LA p. 562 #3; 16 CA pp. 574–575 #15, ACT-A #1–8	CI 2; 6 PTT #6
SC.912.E.7.8 Explain how various atmospheric, oceanic, and hydrologic conditions in Florida have influenced and can influence human behavior, both individually and collectively.	U2 p. 199 Partners in Sustainability; 6 EAW p. 159 TC; 6.1 pp. 161–162; 7.3 p. 234; 10.2 p. 334; 16.2 pp. 555–556	
SC.912.E.7.9 Cite evidence that the ocean has had a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water.	3.4 p. 84, p. 88; 3.4 LA p. 92 #1; 6.1 p. 162; 6.3 p. 184; 6.3 LA p. 185 #3–5; 16.2 p. 551	

STANDARD	STUDENT/TEACHER EDITION	ONLINE RESOURCES
<p>SC.912.L.14.6 Explain the significance of genetic factors, environmental factors, and pathogenic agents to health from the perspectives of both individual and public health.</p>	<p>1.3 p. 31; 4.3 pp. 122–123; 4.3 LA p. 123 #5; 9.1 pp. 286–287; 9.1 LA p. 289 #1, #4, #5; 9.2 pp. 294–295; 9.4 LA p. 314 #3; 9 CA p. 324 #25; 15.1 pp. 503–504; 15.2 SF p. 505 TC; 15.2 p. 506, pp. 508–511; 15.2 LA p. 511 #1–6; 15.3 p. 512, p. 515; 15.3 SF p. 514 TC; 15.3 LA p. 515 #1–4; 15.4 pp. 517–518, pp. 520–521; 15.4 LA p. 521 #1–5; 15 CA pp. 528–529 #1–3, #5–10, #12, #13, #15–20, ACT-A #6, ACT-B</p>	<p>CI 15; 15 PTT #4–12; CI 16</p>
<p>SC.912.L.15.3 Describe how biological diversity is increased by the origin of new species and how it is decreased by the natural process of extinction.</p>	<p>4 EAW p. 106 TC; 4.1 pp. 109–111; 4.1 LA p. 115 #2–4; 4.2 p. 119; 4.2 LA p. 119 #2, #4; 4.3 pp. 120–123; 4.4 p. 126; 4.4 LA p. 127 #4; 4 CA p. 130 #14, #20, #21, #25, #26; 5 CA p. 154 #22, #29, #30; 7 CS p. 212; 7.1 pp. 213–220; 7.1 LA p. 220 #1, #2, #4, #6; 7.2 LA p. 231 #1, #5; 7 CA p. 240 #11, #12, #20, #21</p>	<p>4 PTT #10, #12–14; 7 PTT #3</p>
<p>SC.912.L.15.13 Describe the conditions required for natural selection, including: overproduction of offspring, inherited variation, and the struggle to survive, which result in differential reproductive success.</p>	<p>4 EAW p. 106 TC; 4.1 p. 111; 4.3 pp. 120–123; 4.3 LA p. 123 #1–5; 4.4 p. 124, p. 127; 4.4 LA p. 127 #1; 4 TIAT p. 128 #1, #4, #5; 4 CA p. 130 #23, #27, #28; 5.1 p. 141; 5.1 LA p. 141 #4, #5; 5 CA p. 154 #11, #24</p>	<p>CI 4; 4 PTT #2, #9</p>
<p>SC.912.L.16.10 Evaluate the impact of biotechnology on the individual, society and the environment, including medical and ethical issues.</p>	<p>3.2 EF p. 79; 4.4 p. 127; 4.4 LA p. 127 #3; 9.2 p. 297, p. 299; 9.2 LA p. 301 #2; 9.4 pp. 312–314; 9.4 LA p. 314 #3; 9 CA p. 324 #13, #18, #23</p>	<p>CI 9; 9 PTT #8</p>
<p>SC.912.L.17.1 Discuss the characteristics of populations, such as number of individuals, age structure, density, and pattern of distribution.</p>	<p>3 CA p. 98 #14, #15; 4.1 LA p. 115 #4; 4 CA p. 130 #26; 5.3 pp. 145–147, pp. 149–150; 5 TIAT p. 152; 5 CA pp. 154–155 #6, #13, #27, #28, #31; 14 CS p. 474; 14.1 SF p. 476; 14.2 p. 480; 14.2 LA p. 482 #2, #3</p>	<p>6 PTT #7; 7 PTT #5; 14 PTT #5, #9</p>
<p>SC.912.L.17.4 Describe changes in ecosystems resulting from seasonal variations, climate change and succession.</p>	<p>4.4 LA p. 127 #1; 5.2 pp. 142–143; 5.2 LA p. 144 #1–5; 5.3 p. 150; 5 CA pp. 154–155 #12, #26, #30, ACT-B; 6 CS p. 160; 6.1 SF p. 165 TC; 6.2 p. 168, p. 170, p. 172, p. 174, p. 178; 6.2 LA p. 179 #6; 8.4 p. 264; 10.1 LA p. 333 #3; 16.2 p. 551, pp. 554–557, p. 560, p. 562; 16.2 EAW p. 561; 16.2 LA p. 562 #5, #6</p>	<p>CI 5; 5 PTT #8; 7 PTT #8; 8 PTT #1; CI 9; CI 10; 10 PTT #9; 16 PTT #5, #11</p>
<p>SC.912.L.17.5 Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.</p>	<p>1.3 p. 28; 1.3 LA p. 35 #4; 3 CA p. 98 #16; 5.3 p. 145, p. 147, pp. 150–151; 5.3 LA p. 151 #1–6; 5 TIAT p. 152 #2, #3; 5 CA pp. 154–155 #3, #7, #14, #16, #18, #27, #31; 6.3 p. 180; 7.2 p. 227; 14.1 pp. 475–476; 14.1 SF p. 476 TC; 14.1 LA p. 476 #3, #5; 14.2 pp. 477–480; 14.2 LA p. 482 #1, #5; 14 CA p. 496 #2, #5, #7, #14–17</p>	<p>5 PTT #11–15; 14 PTT #4, #7, #12</p>
<p>SC.912.L.17.6 Compare and contrast the relationships among organisms, including predation, parasitism, competition, commensalism, and mutualism.</p>	<p>3.1 LA p. 73 #2; 3.5 SF p. 95 TC; 3 CA p. 98 #1; 4.2 p. 118; 5.1 pp. 137–139, p. 141; 5.1 LA p. 141 #1–5; 5 CA pp. 154–155 #5, #9–11, #17, 19–21, #23–25, ACT-A #8; 6 CS p. 160; 9.4 p. 311; 15.2 p. 504</p>	<p>3 PTT #1; CI 4; 4 PTT #4; 5 PTT #2–7; 16 PTT #15</p>
<p>SC.912.L.17.7 Characterize the biotic and abiotic components that define freshwater systems, marine systems and terrestrial systems.</p>	<p>4.1 LA p. 115 #4; 6 EAW p. 159 TC; 6.2 pp. 167–168, p. 170, pp. 172–178; 6.2 SF p. 169; 6.2 LA p. 179 #2, #5; 6.3 pp. 180–184; 6.3 LA p. 185 #1–5; 6.4 pp. 186–189; 6.4 LA p. 189 #1–6; 6 TIAT p. 190 #1–6; 6 CA pp. 192–193 #3, #4, #6–11, #13, #17–27, ACT-A #3–6; U2 UEP pp. 194–195 #1–26</p>	<p>5 PTT #1; CI 6; 6 PTT #10, #11, #13–15; CI 14</p>

STANDARD	STUDENT/TEACHER EDITION	ONLINE RESOURCES
<p>SC.912.L.17.8 Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species.</p>	<p>1.2 p. 23; 1.1 LA p. 23 #4; 1 CA p. 42 #12; 3 EAW p. 68 TC; 3.2 EF p. 79 TC; 3 TIAT p. 96 #1, #2; 3 CA p. 98 #23; 4 EAW p. 106; 4 CS p. 108; 4.1 p. 111; 4.1 SF p. 114; 4.1 LA p. 115 #1; 4.2 LA p. 119 #4; 4.4 LA p. 127 #1; 4 CA p. 130 #16, #25; 5.2 LA p. 144 #3, #4; 5.3 p. 150; 5 CA pp. 154–155 #29, #30, ACT-A #8; 6 EAW p. 159 TC; 6.1 SF p. 165 TC; 6.2 p. 179; 6.3 p. 184; 6.3 LA p. 185 #3–5; 6.4 p. 189; 6.4 LA p. 189 #4, #6; 6 TIAT p. 190 #1–6; 6 CA pp. 192–193 #13, #23–26; 7 EAW p. 210 TC; 7 CS p. 212; 7.1 p. 216, p. 220; 7.2 pp. 221–222, pp. 224–229; 7.2 SF p. 223; 7.2 LA p. 231 #2; 7.3 p. 236; 7.3 LA p. 238 #3; 7 CA p. 240 #6, #15, #17, #19, #20; 8.1 SF p. 248; 8.1 pp. 249–251; 8.2 p. 255; 8.4 p. 265; 8.5 pp. 266–267, p. 270; 8.5 LA p. 272 #1; 9.2 LA p. 301 #3; 9 SF p. 303 TC; 9.3 p. 308, p. 311; 9.3 LA p. 311 #1, #2; 9.4 pp. 312–313; 9.4 LA p. 314 #1–3; 9 CA p. 324 #3, #9, #19, #25; 16.2 p. 551, pp. 554–557, p. 560</p>	<p>CI 5; 5 PTT #9, #10; 6 PTT #6; CI 8; 8 PTT #14; CI 9; 9 PTT #11</p>
<p>SC.912.L.17.9 Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels and the reduction of available energy at successive trophic levels.</p>	<p>1.1 LA p. 23 #4; 1 CA p. 42 #8, #11; 2 CA p. 64 #28; 3.1 SF p. 72 TC; 3.2 pp. 74–75, p. 78, p. 80; 3.2 EF p. 79; 3.2 LA p. 80 #1–4; 3.3 pp. 81–82; 3.3 LA p. 83 #1–4; 3 TIAT p. 96 #1, #3–5; 3 CA pp. 98–99 #2–4, #9, #11, #17–19, #21, #27–31; 4 CO p. 105; 4 EAW p. 106; 7.1 LA p. 220 #6; 9.2 LA p. 301 #4; 9.3 p. 311; 9.3 LA p. 311 #1; 9.4 pp. 312–313; 9.4 LA p. 314 #1–3; 9.5 p. 321</p>	<p>CI 1; 1 PTT #2, #4; 2 PTT #12; 3 PTT #2–9; CI 7; 9 PTT #12, #15</p>
<p>SC.912.L.17.10 Diagram and explain the biogeochemical cycles of an ecosystem, including water, carbon, and nitrogen cycle.</p>	<p>1.1 LA p. 23 #2–4; 1 CA p. 42 #2, #8, #13; 2 CA p. 65 #35; 3.1 SF p. 72 TC; 3.4 pp. 84–85, pp. 87–91; 3.4 SF p. 87; 3.4 LA p. 92 #1, #2, #4, #5; 3 CA p. 98 #8, #10, #12, #18, #19, #22, #23, #26, #27; 6.2 p. 178; 6 CA p. 192 #9; 8.1 p. 247; 8.5 LA p. 272 #2; 8 CA p. 275 ACT-A #3, #4; 10 CA p. 358 #15</p>	<p>1 PTT #2, #4; 3 PTT #3, #6, #10–12</p>
<p>SC.912.L.17.11 Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.</p>	<p>U1 p. 14; 1.1 pp. 21–22; 1.1 LA p. 23 #1, #2; 1.2 p. 24; 1 TIAT p. 40 #2–6; 1 CA p. 42 #1, #4, #14; 2 CS p. 48; 2 CA p. 65 #34; 3 CA p. 98 #25; 4.1 p. 111; 4.1 LA p. 115 #1; 4.2 pp. 116–117; 4 CA p. 130 #16, #24; 6 CA p. 192 #22, #24, #25; 7.2 p. 228; 7.3 p. 237; 8.1 p. 247, pp. 250–251; 8.2 p. 255; 8.2 LA p. 256 #2; 9.2 p. 299; 9.5 p. 318; 9 TIAT p. 322 #2, #3; 10.1 p. 331; 10.1 LA p. 333 #1, #5; 10.2 pp. 334–335, p. 338; 10.2 SF p. 335 TC; 10.2 LA p. 338 #1–5; 10.3 LA p. 342 #1, #4, #5; 10 TIAT p. 356 #1–4, #6–9; 10 CA p. 358 #6, #17, #19, #21, #23, #24; 11 EAW p. 362 TC; 12 CO p. 390; 12 EAW p. 392 TC; 12 CS p. 394; 12.1 p. 395; 12.1 LA p. 396 #2; 12.2 p. 397, pp. 402–403, p. 405, p. 407; 12.2 LA p. 407 #2, #5; 12.3 SF p. 409 TC; 12.3 p. 411, pp. 414–415; 12 CA p. 418 #2, #3, #6, #8–11, #15–18, #20–22; 13 EAW p. 422 TC; 13.1 p. 429; 13.2 p. 434, pp. 440–444; 13.2 LA p. 449 #3, #5; 13.3 EF p. 450 TC; 13 CA p. 454 #11, #18, #19, #23; 14 EAW p. 472; 18.1 LA p. 620 #4; 18.2 p. 623; 18.2 LA p. 625 #2, #6; 18 CA p. 640 #13, #14, #17</p>	<p>4 PTT #3; 6 PTT #12; 10 PTT #4, #5, #7; 12 PTT #2–7, #10, #12, #13; 13 PTT #5, #10, #11; 18 PTT #2, #4, #9</p>

STANDARD	STUDENT/TEACHER EDITION	ONLINE RESOURCES
<p>SC.912.L.17.12 Discuss the political, social, and environmental consequences of sustainable use of land.</p>	<p>1.1 pp. 20–21; 1.3 p. 31, pp. 34–35; 1.4 pp. 36–39; 1.4 LA p. 39 #3–5; 7.2 p. 222; 7.2 SF p. 223 TC; 8 CS p. 246; 8.1 SF p. 248 TC; 8.1 pp. 249–252, p. 254; 8.1 LA p. 254 #4; 8.2 LA p. 256 #4; 8.3 LA p. 261 #1; 8 TIAT p. 272 #5; 8 CA p. 274 #4; 9 EAW p. 282; 9.2 pp. 294–295; 9.2 LA p. 301 #1; 9.3 p. 304; 9.3 EAW p. 306; 9.5 p. 315, pp. 318–319, p. 321; 9.5 LA p. 321 #4, #5; 9 TIAT p. 322 #1–5; 9 CA p. 324 #12, #15; 12.2 p. 400; 16.2 p. 546; 18.1 LA p. 620 #2, #3; 18.2 LA p. 625 #1; 18.3 p. 630; 18.3 LA p. 634 #2–4; 18.4 p. 637; 18.4 LA p. 638 #1, #3; 18 TIAT p. 638 #1, #2, #5–7; 18 CA p. 640 #6</p>	<p>CI 6; 18 PTT #6, #10</p>
<p>SC.912.L.17.13 Discuss the need for adequate monitoring of environmental parameters when making policy decisions.</p>	<p>12 EAW p. 393; 14 EAW p. 472; 18.1 LA p. 620 #3; 18.2 p. 623; 18.2 LA p. 625 #3, #5; 18.3 p. 627, p. 630, p. 634; 18.3 LA p. 634 #1, #3–5; 18.4 p. 637; 18 TIAT p. 638 #1–3, #5–7; 18 CA p. 640 #5, #8, #16</p>	<p>18 PTT #3, #4, #6, #8</p>
<p>SC.912.L.17.14 Assess the need for adequate waste management strategies.</p>	<p>9.3 p. 309; 12.3 p. 410; 17.1 pp. 581–582, p. 584, p. 586; 17.1 LA p. 586 #1, #4; 17.2 pp. 587–591, pp. 593–594; 17.2 SF p. 592 TC; 17.2 LA p. 596 #1–5; 17.3 pp. 596–597, pp. 599–601, p. 604; 17.3 LA p. 604 #1–4; 17.4 pp. 604–607; 17.4 LA p. 607 #1–5; 17 TIAT p. 608 #1–4; 17 CA pp. 610–611 #1–20, ACT-A #1–5, ACT-B; 18.4 LA p. 638 #2</p>	<p>17 PTT #1–15</p>
<p>SC.912.L.17.15 Discuss the effects of technology on environmental quality.</p>	<p>1.3 LA p. 35 #1; 2.1 EF p. 50 TC; 9.3 p. 302; 11 EAW p. 362 TC; 11.4 p. 383; 11.4 SF p. 384 TC; 11.4 LA p. 385 #2; 11 CA pp. 388–389 #16, #20, #23, ACT-B; 17 CS p. 580; 17.3 p. 597; 17.2 LA p. 596 #4</p>	<p>CI 9; 9 PTT #8; 11 PTT #10</p>
<p>SC.912.L.17.16 Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution.</p>	<p>1.1 p. 23; 1.2 p. 26; 1.2 LA p. 28 #1; 1.4 p. 37; 1 CA p. 42 #6; 3.1 p. 73; 3.4 p. 84, pp. 90–91; 3.4 SF p. 87; 3.5 LA p. 96 #4; 3 CA p. 99 ACT-A #1–4; U1 UEP p. 101 #1–3; 5 EAW p. 134 TC; 6 CS p. 160; 6.1 SF p. 165; 6.1 LA p. 166 #3, #5, #6; 6.4 p. 186; 6 CA p. 192 #12, #13; 7.2 p. 228; 7.2 LA p. 231 #3, #5; 8.1 p. 249, p. 252; 8.5 p. 270; 9 CS p. 284; 9.3 p. 302, p. 304, p. 307, p. 309; 9.3 LA p. 311 #1–4; 9.5 p. 318; 9.5 LA p. 321 #1, #4; 9 CA p. 324 #3, #7, #8; 10.1 p. 332; 10.4 pp. 342–344, pp. 346–347, pp. 351–355; 10.4 LA p. 355 #1–4, #6, #7; 10 CA pp. 358–359 #2, #12–14, #20, #22, #23, #26, ACT-A #1–9; 11.3 p. 379, p. 382; 11.3 LA p. 382 #2; 11 CA pp. 388–389 #12, #20, ACT-A #3, ACT-B; 12 EAW p. 392; 12.2 p. 397, p. 405; 13.2 p. 445; 16 CS p. 534; 16.4 pp. 569–572; 16.4 LA p. 572 #1–3; 16 CA p. 574 #10; 17.1 LA p. 586 #2; 18 TIAT p. 638 #5–7</p>	<p>CI 1; 1 PTT #5; CI 2; CI 3; CI 4; CI 6; 6 PTT #5, #15; CI 9; 9 PTT #5–7; CI 10; 10 PTT #11, #13–15; 11 PTT #7, #9; 16 PTT #1; 18 PTT #3</p>
<p>SC.912.L.17.17* Assess the effectiveness of innovative methods of protecting the environment.</p>	<p>U1 UEP p. 101 #4, #6; 4.2 LA p. 119 #4; 5 EAW p. 134 TC; 5 CA p. 154 #22; 6 EAW p. 159 TC; 6.3 LA p. 185 #3; 6 TIAT p. 190 #1–4; 6 CA p. 193 #26; 7.3 p. 234; 7 CA p. 240 #22; 9 EAW p. 282 TC; 9.2 p. 299; 9.4 p. 314; 9.4 LA p. 314 #1, #2; 9.5 pp. 318–319; 9.5 LA p. 321 #2; 9 CA p. 324 #22; 10.3 p. 340; 10.3 LA p. 342 #2; 10.4 EF p. 354 TC; 10 TIAT p. 356 #9; 10 CA p. 358 #9; 11 EAW p. 362 TC; 11.4 p. 383, p. 385; 11 SF p. 384 TC; 11.4 LA p. 385 #1, #2, #4; 11 TIAT p. 386 #4; 11 CA pp. 388–389 #15, #16, #18, #20, #23, ACT-A #4, #5, ACT-B; 14.4 LA p. 494 #2, #4; 16.1 p. 545; 17.4 LA p. 607 #4; 18.3 LA p. 634 #3, #4; 18.4 p. 637; 18.4 LA p. 638 #1, #3; 18 TIAT p. 638 #3, #4</p>	<p>CI 1; 9 PTT #9, #13, #14; 10 PTT #10; 11 PTT #4, #10</p>

STANDARD	STUDENT/TEACHER EDITION	ONLINE RESOURCES
<p>SC.912.L.17.18 Describe how human population size and resource use relate to environmental quality.</p>	<p>1.1 p. 22; 1.2 p. 24, pp. 26–28; 1.2 LA p. 28 #2, #3; 1.3 pp. 30–31, pp. 34–35; 1.3 LA p. 35 #2–4; 1.4 p. 37; 1.4 LA p. 39 #2; 1 CA p. 42 #3, #21; 4 CA p. 130 #21, #25; 5 CA p. 155 #32; 6.2 p. 179; 6 TIAT p. 190 #1–6; 7.2 p. 231; 7.2 LA p. 231 #4; 8.4 p. 263; 9.3 p. 302; 10 CS p. 330; 10.2 p. 334, p. 338; 10.2 LA p. 338 #1–5; 10.3 LA p. 342 #3; 10 CA p. 358 #8, #14, #15, #17, #18, #23, #24; 11.3 p. 379, pp. 382–383; 11.4 p. 385; 11 CA pp. 388–389 #12, ACT-A #3, #4; 14 CS p. 474; 14.1 SF p. 476; 14.3 pp. 484–485, p. 488; 14.4 pp. 489–490, p. 493; 14 EAW p. 491; 14.4 EF p. 492; 14 CA p. 496 #20; 15 CS p. 502; 15.2 p. 510; 15.4 p. 520; 18.4 p. 637; 18.4 LA p. 638 #2; 18 TIAT p. 638 #4; 18 CA p. 640 #20</p>	<p>CI 4; 6 PTT #6, #14, #15; 9 PTT #3; 10 PTT #6, #13; 11 PTT #7, #9; 18 PTT #9, #12, #15</p>
<p>SC.912.L.17.19 Describe how different natural resources are produced and how their rates of use and renewal limit availability.</p>	<p>1.1 p. 20; 4.2 LA p. 119 #4; 7.2 p. 226; 8.1 p. 247, p. 249; 8.1 p. 253; 8.5 p. 266; 9.3 p. 302, p. 311; 10 EAW p. 328 TC; 10 CS p. 330; 10.1 pp. 331–333; 10.1 LA p. 333 #1–3, #5; 10.2 p. 334, p. 336, p. 338; 10 SF p. 335 TC; 10.2 LA p. 338 #1–4; 10 TIAT p. 356 #1, #2, #4, #7, #9; 10 CA pp. 358–359 #1, #3, #7, #8, #15–18, #21, #24, #25, ACT-B #1–3; 11 CS p. 364; 11.1 LA p. 370 #1; 11.2 pp. 370–376; 11.2 LA p. 376 #1, #2, #5, #6; 11.3 p. 376, pp. 378–379; 11.3 EAW p. 377; 11.3 LA p. 382 #1, #3, #4; 11.4 p. 385; 11.4 LA p. 385 #1, #3, #4; 11 TIAT p. 386 #3; 11 CA pp. 388–389 #1, #3–6, #10, #14, #15, #17, #18, #20, #22, #24, ACT-A #2–5; 12 CS p. 394; 12.1 pp. 395–396; 12.2 p. 397, pp. 400–403, p. 405; 12.3 p. 408; 12 TIAT p. 416; 13 EAW p. 422; 13 CS p. 424; 13.2 p. 434, pp. 440–446, p. 448; 18.1 LA p. 620 #4; 18.2 p. 623; 18.2 LA p. 625 #3, #6; 18 CA p. 640 #17, #20</p>	<p>10 PTT #1–3, #6–11; CI 11; 11 PTT #1, #2, #4, #5, #7–9, #11, #14, #15; 18 PTT #1</p>
<p>SC.912.L.17.20 Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.</p>	<p>1 EAW p. 16; 1 CS p. 18; 1.1 pp. 19–20; 1.2 p. 24, pp. 26–27; 1.3 pp. 30–31; 1.4 pp. 38–39; 1.4 LA p. 39 #1, #3–5; 1 TIAT p. 40 #1–7; 1 CA pp. 42–43 #3, #5, #7, #10, #15–23, ACT-A #4, ACT-B; 2 EAW p. 46; 3 CA p. 98 #23; 8.4 p. 263; 9.1 p. 288; 9.3 p. 309; 9.5 p. 318, p. 321; 9 TIAT p. 322 #1–5; 9 CA pp. 324–325 #3, #6, #12, #15, #17, #21, #24, ACT-B #1–3; 10.1 LA p. 333 #5; 10.2 p. 334; 10.3 pp. 338–340; 10.4 p. 355; 10 TIAT p. 356; 10 CA pp. 358–359 #5, #16, #20, #22, #25, ACT-B #1–3; 11.4 p. 383, p. 385; 11.4 LA p. 385 #3; 11 TIAT p. 386 #3, #4; 11 CA p. 389 ACT-B; 12.2 p. 397, p. 406; 13.1 pp. 425–429, pp. 431–433; 13.2 pp. 434–435, p. 444; 13.3 p. 449, p. 451; 13.3 EF p. 450; 13 TIAT p. 452; 14.3 pp. 484–485; 14.4 pp. 489–490, p. 493; 14.4 EF p. 492; 14 CA p. 496 #22, #23; 16.3 p. 568; 17.1 p. 582, p. 586; 17.1 LA p. 586 #3; 17.2 pp. 590–591; 17.2 SF p. 592; 17 TIAT p. 608 #2; 17 CA p. 610 #19; 18 CS p. 616; 18.1 p. 618; 18.1 LA p. 620 #1–3, #5; 18.2 p. 623, p. 625; 18.2 LA p. 625 #1, #3, #4; 18.3 p. 631; 18.3 LA p. 634 #2–4; 18.4 pp. 635–637; 18.4 LA p. 638 #1–4; 18 TIAT p. 638 #2–4; 18 CA pp. 640–641 #6, #17, #20, ACT-B</p>	<p>1 PTT #1, #3, #6, #8, #10–15; 3 PTT #15; CI 4; 6 PTT #6; 9 PTT #4, #6, #12, #14, #15; 10 PTT #8, #10; 18 PTT #1, #7, #9, #10, #12, #15</p>
<p>SC.912.L.18.12* Discuss the special properties of water that contribute to Earth’s suitability as an environment for life: cohesive behavior, ability to moderate temperature, expansion upon freezing, and versatility as a solvent.</p>	<p>3.4 p. 84; 3.4 SF p. 87 TC</p>	

STANDARD	STUDENT/TEACHER EDITION	ONLINE RESOURCES
<p>SC.912.N.1.1 Define a problem based on a specific body of knowledge, for example: biology, chemistry, physics, and earth/space science, and do the following:</p> <ol style="list-style-type: none"> 1. Pose questions about the natural world, (Articulate the purpose of the investigation and identify the relevant scientific concepts). 2. Conduct systematic observations, (Write procedures that are clear and replicable. Identify observables and examine relationships between test (independent) variable and outcome (dependent) variable. Employ appropriate methods for accurate and consistent observations; conduct and record measurements at appropriate levels of precision. Follow safety guidelines). 3. Examine books and other sources of information to see what is already known, 4. Review what is known in light of empirical evidence, (Examine whether available empirical evidence can be interpreted in terms of existing knowledge and models, and if not, modify or develop new models). 5. Plan investigations, (Design and evaluate a scientific investigation). 6. Use tools to gather, analyze, and interpret data (this includes the use of measurement in metric and other systems, and also the generation and interpretation of graphical representations of data, including data tables and graphs), (Collect data or evidence in an organized way. Properly use instruments, equipment, and materials (e.g., scales, probeware, meter sticks, microscopes, computers) including set-up, calibration, technique, maintenance, and storage). 7. Pose answers, explanations, or descriptions of events, 8. Generate explanations that explicate or describe natural phenomena (inferences), 9. Use appropriate evidence and reasoning to justify these explanations to others, 10. Communicate results of scientific investigations, and 11. Evaluate the merits of the explanations produced by others. 	<p>1 CA p. 43 ACT-B; 2 CS p. 48; 2.1 p. 49; 2 EAW p. 51; 2.1 p. 54; 2.1 LA p. 54 #1, #5; 2.2 LA p. 58 #3; 2.3 LA p. 59 #5; 2 TIAT p. 62 #1–5; 2 CA pp. 64–65 #2, #18, #31, #32, ACT-A #1–10; 3 EAW p. 68 TC; 3.5 p. 92; 3.4 LA p. 92 #3; 3.5 EAW p. 94; 3.5 LA p. 96 #3; 3 CA p. 99 ACT-A #4, ACT-B #1–4; U1 UEP p. 101 #1–4, #7–19; 4 EAW p. 106 TC; 4.1 p. 111; 4.1 SF p. 114 TC; 4.1 LA p. 115 #1–4; 4.2 p. 119; 4.2 LA p. 119 #1–4; 4.3 p. 120; 4.3 LA p. 123 #3, #4; 4.4 p. 124, pp. 126–127; 4.4 SF p. 126 TC; 4.4 LA p. 127 #1–4; 4 TIAT p. 128 #1–5; 4 CA pp. 130–131 #14–16, #21 #23–28, ACT-A #1–6, ACT-B #4, #6; 5 EAW p. 134 TC; 5.1 pp. 138–139, p. 141; 5.1 LA p. 141 #1–5; 5.2 pp. 142–143; 5.2 LA p. 144 #1–5; 5.3 pp. 150–151; 5.3 LA p. 151 #1–6; 5 TIAT p. 152 #1–3; 5 CA pp. 154–155 #20–32, ACT-A #1–8, ACT-B; 6 EAW p. 159 TC; 6.1 SF p. 165 TC; 6.1 LA p. 166 #1–6; 6.2 SF p. 169 TC; 6.2 p. 179; 6.2 LA p. 179 #1–6; 6.3 pp. 180–181, p. 184; 6.3 LA p. 185 #1, #3–5; 6.4 p. 189; 6.4 LA p. 189 #1, #3–6; 6 TIAT p. 190 #3–6; 6 CA pp. 192–193 #12–20, #22, #24–27, ACT-A #1–7; U2 UEP pp. 194–195 #1, #2, #4–18, #20–26; 7.3 SF p. 235 TC; 7 TIAT p. 238 #2, #3; 7 CA p. 241 ACT-A #3; 8 TIAT p. 272 #3, #4; 8 CA p. 275 ACT-A #1–3, #5, ACT-B; U3 UEP pp. 276–277 #1–14, #17–20, #23–25; 9.2 p. 301; 9.2 LA p. 301 #3; 9.5 LA p. 321 #4, #5; 9 TIAT p. 322 #1–5; 9 CA pp. 324–325 #22, #23, #25, ACT-A Develop Models #1, #2, Questions #1–4, ACT-B #1–3; 10.2 LA p. 338 #5; 10.3 LA p. 342 #4, #5; 10.4 EF p. 354 TC; 10.4 LA p. 355 #6; 10 TIAT p. 356 #1, #3, #5, #7, #8; 10 CA pp. 358–359 #21, #23, ACT-A #1–9, ACT-B #2–4; 11.1 LA p. 370 #4; 11.2 LA p. 376 #5, #6; 11.3 LA p. 382 #3, #4; 11.4 SF p. 384 TC; 11 TIAT p. 386 #1, #2, #4; 11 CA pp. 388–389 #21, ACT-A #1–5, ACT-B; 13.1 LA p. 433 #3, #4; 13.2 LA p. 449 #5; 13 CA p. 455 ACT-A #8–10, ACT-B; U4 UEP pp. 456–457 #1, #2, #4–8, #10–20, #22–25; 14 TIAT p. 494 #6, #7; 14 CA pp. 496–497 #21, ACT-A Procedure #6; 15 TIAT p. 526 #2–6; 15 CA p. 529 ACT-A #4, #5; 16.2 SF p. 552; 16.2 LA p. 562 #7; 16.3 LA p. 569 #5; 16 TIAT p. 572 #1, #3, #8; 16 CA pp. 574–575 #20, ACT-A #1–8, ACT-B; 17.4 LA p. 607 #5; 17 CA p. 611 ACT-A #2–5; 18 CA p. 641 ACT-A #1–7, ACT-B; U5 UEP pp. 642–643 #1–21; Appendix 1 pp. 644–645</p>	<p>CI 1; CI 2; 2 PTT #1; CI 3; 3 PTT #13; CI 4; CI 5; CI 6; CI 7; CI 8; CI 9; CI 10; CI 11; CI 12; CI 13; CI 14; CI 15; CI 16; CI 17; CI 18</p>
<p>SC.912.N.1.2 Describe and explain what characterizes science and its methods.</p>	<p>1.1 pp. 19–20; 2 CS p 48; 2.1 p. 49, p. 54; 2.1 EF p. 50 TC; 2.1 LA p. 54 #3, #4; 2 TIAT p. 62 #4, #5; 2 CA p. 64 #1, #8; 3.5 p. 92; 3.5 EAW p. 94; 3.5 LA p. 96 #1</p>	<p>2 PTT #2, #3, #5; 7 PTT #7</p>

STANDARD	STUDENT/TEACHER EDITION	ONLINE RESOURCES
<p>SC.912.N.1.3 Recognize that the strength or usefulness of a scientific claim is evaluated through scientific argumentation, which depends on critical and logical thinking, and the active consideration of alternative scientific explanations to explain the data presented.</p>	<p>2.1 p. 49, p. 54; 4 EAW p. 106 TC; 4.1 SF p. 114 TC; 4.1 LA p. 115 #3, #4; 4.2 LA p. 119 #3, #4; 4.3 p. 120; 4.3 LA p. 123 #3, #4; 4.4 p. 124, p. 127; 4.4 SF p. 126 TC; 4.4 LA p. 127 #1–4; 4 TIAT p. 128 #1, #5; 4 CA p. 130 #23–25, #27, #28; 7 TIAT p. 238 #4; 7.3 LA p. 238 #5; 8.5 LA p. 272 #4; 8 CA p. 274 #18, #19; U3 UEP p. 277 #16, #22; 10.4 LA p. 355 #7; 13.2 LA p. 449 #4; 13 TIAT p. 452 #2–4; 13 CA p. 454 #21, #24; U4 UEP p. 457 #21</p>	
<p>SC.912.N.1.4 Identify sources of information and assess their reliability according to the strict standards of scientific investigation.</p>	<p>2.1 p. 49, p. 54; 6.4 LA p. 189 #5; 6 TIAT p. 190 #1, #4; U2 UEP p. 194 #1; U3 UEP p. 277 #5; 12 CA p. 419 ACT-A #2</p>	
<p>SC.912.N.1.5 Describe and provide examples of how similar investigations conducted in many parts of the world result in the same outcome.</p>	<p>U1 UEP p. 100; 4.1 SF p. 114 TC; U2 UEP p. 194 #4; U3 UEP pp. 276–277 #5; 13 CS p. 424; 13 TIAT p. 452 #1–5; U4 UEP p. 456; 15 TIAT p. 526 #1–6; 18 TIAT p. 638 #1–7</p>	
<p>SC.912.N.1.6 Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied.</p>	<p>2 CS p. 48; 4 EAW p. 106; 4.1 SF p. 114; 5 EAW p. 134; 18 EAW p. 614 TC</p>	<p>CI 4; CI 5</p>
<p>SC.912.N.2.1 Identify what is science, what clearly is not science, and what superficially resembles science (but fails to meet the criteria for science).</p>	<p>1.1 pp. 19–20; 1 CA p. 42 #9; 2.1 p. 49, p. 54; 2.1 EF p. 50; 18.3 p. 630</p>	<p>3 PTT #13</p>
<p>SC.912.N.2.2 Identify which questions can be answered through science and which questions are outside the boundaries of scientific investigation, such as questions addressed by other ways of knowing, such as art, philosophy, and religion.</p>	<p>1.1 pp. 19–20; 2.1 p. 49, p. 54; 2.1 EF p. 50; 18.3 p. 630</p>	
<p>SC.912.N.2.4 Explain that scientific knowledge is both durable and robust and open to change. Scientific knowledge can change because it is often examined and re-examined by new investigations and scientific argumentation. Because of these frequent examinations, scientific knowledge becomes stronger, leading to its durability.</p>	<p>1 TIAT p. 40; 2.1 p. 49, p. 54; 2.1 EF p. 50; 2.1 LA p. 54 #4; 3 CA p. 98 #24; U2 UEP p. 195 #19; 7.3 LA p. 238 #5; 8.1 LA p. 254 #4</p>	<p>CI 13</p>
<p>SC.912.N.3.1 Explain that a scientific theory is the culmination of many scientific investigations drawing together all the current evidence concerning a substantial range of phenomena; thus, a scientific theory represents the most powerful explanation scientists have to offer.</p>	<p>2.1 p. 49, p. 54; 2 CA p. 64 #12</p>	<p>2 PTT #4</p>
<p>SC.912.N.3.5 Describe the function of models in science, and identify the wide range of models used in science.</p>	<p>1.2 p. 27; 1.2 LA p. 28 #2; 2.1 p. 49; 2.1 LA p. 54 #2; 2.4 LA p. 62 #3; 2 CA p. 64 #13; 2 CA p. 65 ACT-A Questions #2; 3.3 LA p. 83 #5; 3.5 EAW p. 94; 3.5 LA p. 96 #2; 3 CA p. 99 ACT-A #1–4; 6.2 p. 178; 7.2 p. 226; 13.1 p. 428; 14 EAW p. 472; 15.4 p. 517; 16 CS p. 534; 16.2 p. 551, p. 554; 16.2 SF p. 552</p>	<p>3 PTT #14</p>
<p>SC.912.N.4.1 Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society’s decision making.</p>	<p>2.1 p. 49, p. 54; 2.1 EF p. 50; U1 UEP pp. 100–101; 5 TIAT p. 152; U2 UEP pp. 194–195; U3 UEP pp. 276–277; 10 TIAT p. 356 #1; 10 CA p. 359 ACT-A #9; U4 UEP pp. 456–457; 15 TIAT p. 526; 18 EAW p. 614 TC; 18.1 SF p. 619 TC; 18.2 p. 623; U5 UEP pp. 642–643</p>	

STANDARD	STUDENT/TEACHER EDITION	ONLINE RESOURCES
<p>SC.912.N.4.2* Weigh the merits of alternative strategies for solving a specific societal problem by comparing a number of different costs and benefits, such as human, economic, and environmental.</p>	<p>1.1 p. 20; 1.4 LA p. 39 #4, #5; 1 CA pp. 42–43 #17, #20, ACT-B; U1 UEP p. 101 #11; 4 CA p. 130 #21; 7.3 pp. 236–238; 8.1 SF p. 248 TC; 8.1 pp. 252–253; 8.2 p. 255; 8.3 p. 261; 8.4 LA p. 265 #3; 9.2 p. 294, p. 297, p. 299; 9.4 pp. 313–314; 9.5 pp. 318–319; 9.5 LA p. 321 #2; 9 CA p. 324 #18; 10.3 p. 339; 10.4 EF p. 354; 10.4 LA p. 355 #6; 10 TIAT p. 356 #9; 10 CA pp. 358–359 #21, ACT-A #8, #9; 11.2 pp. 374–376; 11.2 LA p. 376 #6; 11.3 p. 382; 11.4 SF p. 384; 11.4 p. 385; 11.4 LA p. 385 #4; 11 CA pp. 388–389 #15, #16, #18, #23, ACT-A #4; 12 CS p. 394; 12.2 pp. 403–405; 13 CS p. 424; 13.1 p. 428; 13.2 pp. 433–434, p. 436, pp. 440–446, p. 448; 14.4 p. 493; 14 CA p. 497 ACT-A Procedure #2, #3; 15.3 LA p. 515 #4; 15.4 LA p. 521 #5; 15.5 LA p. 526 #3; 15 CA p. 528 #19; 16.1 LA p. 545 #6; 16.3 pp. 563–564, pp. 567–568; 16.3 LA p. 569 #3, #4; 16.3 EF p. 565 TC; 17.2 p. 594, p. 596; 17.2 SF p. 592; 17.2 LA p. 596 #4, #5; 17.4 p. 606; 17 CA pp. 610–611 #18, #20, ACT-B</p>	<p>1 PTT #7, #9; CI 3; CI 9; CI 14; 16 PTT #10, #12; CI 18</p>
<p>SC.912.P.10.1 Differentiate among the various forms of energy and recognize that they can be transformed from one form to others.</p>	<p>2.3 pp. 58–59; 2.3 LA p. 59 #1–5; 2 CA pp. 64–65 #4, #9, #10, #25, #26, #28, #33, #34; 9 EAW p. 282 TC; 12.1 p. 395; 13 CS p. 424; 13.2 p. 440; U4 UEP p. 456</p>	<p>2 PTT #12, #13; CI 13</p>
<p>SC.912.P.10.2 Explore the Law of Conservation of Energy by differentiating among open, closed, and isolated systems and explain that the total energy in an isolated system is a conserved quantity.</p>	<p>2.4 p. 61; 3.2 p. 80; 3.2 LA p. 80 #4</p>	
<p>SC.912.P.10.4* Describe heat as the energy transferred by convection, conduction, and radiation, and explain the connection of heat to change in temperature or states of matter.</p>	<p>2.2 p. 55; 2.2 LA p. 58 #2; 2.3 pp. 58–59; 2.3 LA p. 59 #3; 6.1 p. 164; 11.1 p. 366; 11.1 LA p. 370 #2; 11 CA p. 388 #9, #13, #21</p>	
<p>SS.912.G.1.1* Design maps using a variety of technologies based on descriptive data to explain physical and cultural attributes of major world regions.</p>	<p>3.5 p. 92; 4 CA p. 131 ACT-A #1, ACT-B #4; 8.4 p. 263; 8.4 LA p. 265 #5; Citizen Science p. 467</p>	
<p>SS.912.G.1.4* Analyze geographic information from a variety of sources including primary sources, atlases, computer, and digital sources, Geographic Information Systems (GIS), and a broad variety of maps. Clarifications: Examples are thematic, contour, and dot-density.</p>	<p>1.2 p. 27; 3.5 p. 92; 6.1 pp. 162–164, p. 166; 6.2 pp. 167–168; 7.2 p. 221; 7.1 SF p. 223; 10 CS p. 330; 10.2 SF p. 335; 11.1 p. 366; 11.1 LA p. 370 #3; 11.3 LA p. 382 #4; 11 CA p. 389 ACT-A #2; 13 TIAT p. 452; 15.4 p. 520; 16.1 p. 541; 18.3 p. 627</p>	<p>4 PTT #3</p>
<p>SS.912.G.3.1* Use geographic terms to locate and describe major ecosystems of Earth.</p>	<p>4.1 p. 110; 6.1 pp. 162–163, p. 166; 6.2 pp. 167–168, p. 170, p. 172, pp. 174–175, p. 178; 6.2 SF p. 169 TC; 6.2 LA p. 179 #1, #4, #5; 6.3 pp. 180–181; 6.4 pp. 186–187; 6 CA p. 192 #16</p>	<p>6 PTT #2, #8</p>
<p>SS.912.G.3.2* Use geographic terms and tools to explain how weather and climate influence the natural character of a place.</p>	<p>4.4 SF p. 126; 6.1 pp. 161–164, p. 166; 6.1 LA p. 166 #1–6; 6.2 pp. 167–168, p. 170, p. 172, pp. 174–175; 6.3 pp. 180–181; 6.4 pp. 186–187; 6 CA pp. 192–193 #2, #5, #14–16, #27; 13 TIAT p. 452</p>	<p>6 PTT #1–4, #7–9; 10 PTT #9</p>
<p>SS.912.G.3.3* Use geographic terms and tools to explain differing perspectives on the use of renewable and non-renewable resources in Florida, the United States, and the world.</p>	<p>1.1 LA p. 23 #4; 1.2 p. 27; 1.3 p. 35; 1.3 LA p. 35 #2, #3; 10 CS p. 330; 10.2 SF p. 335; 11.3 LA p. 382 #4; 13 CS p. 424; 13.3 EF p. 450; 13 TIAT p. 452 #1–5; 16.2 p. 556</p>	<p>11 PTT #11</p>

STANDARD	STUDENT/TEACHER EDITION	ONLINE RESOURCES
SS.912.G.3.5* Use geographic terms and tools to explain how hydrology influences the physical character of a place.	3.4 LA p. 92 #2; 6.1 p. 162, p. 164, p. 166; 6.2 p. 178; 6.3 p. 180; 6.4 p. 187; 6.4 LA p. 189 #1; 10 CS p. 330; 10.1 p. 332; 10.2 p. 334, p. 336; 10.2 LA p. 338 #1, #2	
SS.912.G.5.1* Analyze case studies of how the Earth’s physical systems affect humans.	6.3 LA p. 185 #3; 10 CS p. 330; 18 CS p. 616	
SS.912.G.5.2* Analyze case studies of how changes in the physical environment of a place can increase or diminish its capacity to support human activity.	9 CS p. 284; 9.5 LA p. 321 #4; 14 CS p. 474; 14.1 SF p. 476 TC; 14 TIAT p. 494 #6; 16 CS 534; 16.2 p. 556	
SS.912.G.5.3* Analyze case studies of the effects of human use of technology on the environment of places.	1 CS p. 18; 1.4 LA p. 39 #5; 11 CS p. 364; 12 CS p. 394; 13 CS p. 424; 15 CS p. 502; 17 CS p. 580	
SS.912.G.5.4* Analyze case studies of how humans impact the diversity and productivity of ecosystems.	2 CS p. 48; 3 CS p. 70; 3 CA p. 99 ACT-B #1–4; 4 CS p. 108; 5 CS p. 136; 6 CS p. 160; 7 CS p. 212; 8 CS p. 246; 8.1 LA p. 254 #3; 8.3 p. 261; 8 CA p. 274 #8, #15; 9 CA p. 324 #19	7 PTT #7

Additional Standards for Environmental Science

The following table includes **Florida’s Benchmarks for Excellent Student Thinking (B.E.S.T.) Standards, Health Education (HE) Standards, and the English Language Development (ELD) Standards** associated with Environmental Science.

ENVIRONMENTAL SCIENCE	
STUDENT/TEACHER EDITION	ONLINE RESOURCES
<p>MA.K12.MTR.1.1 Actively participate in effortful learning both individually and collectively. Mathematicians who participate in effortful learning both individually and with others:</p> <ul style="list-style-type: none"> Analyze the problem in a way that makes sense given the task. Ask questions that will help with solving the task. Build perseverance by modifying methods as needed while solving a challenging task. Stay engaged and maintain a positive mindset when working to solve tasks. Help and support each other when attempting a new method or approach. <p>Clarifications: Teachers who encourage students to participate actively in effortful learning both individually and with others:</p> <ul style="list-style-type: none"> Cultivate a community of growth mindset learners. Foster perseverance in students by choosing tasks that are challenging. Develop students’ ability to analyze and problem solve. Recognize students’ effort when solving challenging problems. 	
<p>National Geographic Environmental Science <i>includes opportunities throughout the program for students to participate in effortful learning. For example:</i></p> <p>3 CA p. 99 ACT-B #1–4; 4 CA p. 131 ACT-B #1–6; 5 EAW p. 134 TC; 7 TIAT p. 238 #1; 10 TIAT p. 356 #1–9; 12 CA p. 418 #22; 13 EAW p. 422 TC; 15 CA p. 529 ACT-B; 18 CA p. 641 ACT-B</p>	

STUDENT/TEACHER EDITION	ONLINE RESOURCES
<p>MA.K12.MTR.2.1 Demonstrate understanding by representing problems in multiple ways. Mathematicians who demonstrate understanding by representing problems in multiple ways:</p> <ul style="list-style-type: none"> • Build understanding through modeling and using manipulatives. • Represent solutions to problems in multiple ways using objects, drawings, tables, graphs and equations. • Progress from modeling problems with objects and drawings to using algorithms and equations. • Express connections between concepts and representations. • Choose a representation based on the given context or purpose. <p>Clarifications: Teachers who encourage students to demonstrate understanding by representing problems in multiple ways:</p> <ul style="list-style-type: none"> • Help students make connections between concepts and representations. • Provide opportunities for students to use manipulatives when investigating concepts. • Guide students from concrete to pictorial to abstract representations as understanding progresses. • Show students that various representations can have different purposes and can be useful in different situations. 	
<p>National Geographic Environmental Science <i>includes opportunities throughout the program for students to represent problems in multiple ways. For example:</i> 1.3 LA p. 35 #4; 1 TIAT p. 40 #2–6; 1 CA p. 43 ACT-A #2, #3; 2.4 LA p. 62 #4; 3.3 LA p. 83 #4; 3.4 LA p.92 #4; 3 TIAT p. 96 #3–5; U1 UEP p. 101 #6, #13, #14; 5 TIAT p. 152 #3; 5 CA p. 155 ACT-A #5–8; 6.2 LA p. 179 #5; U2 UEP pp. 194–195 #7, #12, #17; 7 CA p. 241 ACT-A #2; 8.3 LA p. 261 #4; 8 CA p. 275 ACT-A #3; U3 UEP p. 277 #8, #12, #13, #23–25; 9 CA p. 325 ACT-A Develop Models #2, #3, Questions #1, #2; 11 CA p. 389 ACT-A #5; 14 TIAT p. 494 #4; 15 TIAT p. 526 #4; 15 CA p. 529 ACT-A #1–6</p>	<p>CI 1; CI 2; CI 3; CI 7; CI 8; CI 12</p>
<p>MA.K12.MTR.3.1 Complete tasks with mathematical fluency. Mathematicians who complete tasks with mathematical fluency:</p> <ul style="list-style-type: none"> • Select efficient and appropriate methods for solving problems within the given context. • Maintain flexibility and accuracy while performing procedures and mental calculations. • Complete tasks accurately and with confidence. • Adapt procedures to apply them to a new context. • Use feedback to improve efficiency when performing calculations. <p>Clarifications: Teachers who encourage students to complete tasks with mathematical fluency:</p> <ul style="list-style-type: none"> • Provide students with the flexibility to solve problems by selecting a procedure that allows them to solve efficiently and accurately. • Offer multiple opportunities for students to practice efficient and generalizable methods. • Provide opportunities for students to reflect on the method they used and determine if a more efficient method could have been used. 	
<p>National Geographic Environmental Science <i>includes opportunities throughout the program for students to exhibit mathematical fluency. For example:</i> 7 CA p. 241 ACT-A #1; 12 CA p. 419 ACT-A #4; 14 TIAT p. 494 #1–3, #7; 16 TIAT p. 572 #2, #4, #5; 16 CA p. 575 ACT-A #1, #2, #4; 17 TIAT p. 608 #3, #4; 18 CA p. 641 ACT-A #2, #3; U5 UEP p. 643 #14</p>	<p>CI 15; CI 16</p>

STUDENT/TEACHER EDITION	ONLINE RESOURCES
<p>MA.K12.MTR.4.1 Engage in discussions that reflect on the mathematical thinking of self and others. Mathematicians who engage in discussions that reflect on the mathematical thinking of self and others:</p> <ul style="list-style-type: none"> • Communicate mathematical ideas, vocabulary and methods effectively. • Analyze the mathematical thinking of others. • Compare the efficiency of a method to those expressed by others. • Recognize errors and suggest how to correctly solve the task. • Justify results by explaining methods and processes. • Construct possible arguments based on evidence. <p>Clarifications: Teachers who encourage students to engage in discussions that reflect on the mathematical thinking of self and others:</p> <ul style="list-style-type: none"> • Establish a culture in which students ask questions of the teacher and their peers, and error is an opportunity for learning. • Create opportunities for students to discuss their thinking with peers. • Select, sequence and present student work to advance and deepen understanding of correct and increasingly efficient methods. • Develop students' ability to justify methods and compare their responses to the responses of their peers. 	
<p>National Geographic Environmental Science <i>includes opportunities throughout the program for students to discuss their mathematical thinking. For example:</i> 3.5 LA p.94; 3.5 LA p.96 #2; 6.2 LA p.179 #6; 7 CA p. 241 ACT-A #2; 8 EAW p. 244 TC; 16 CA p. 575 ACT-A #1–8; U5 UEP p. 643 #20</p>	
<p>MA.K12.MTR.5.1 Use patterns and structure to help understand and connect mathematical concepts. Mathematicians who use patterns and structure to help understand and connect mathematical concepts:</p> <ul style="list-style-type: none"> • Focus on relevant details within a problem. • Create plans and procedures to logically order events, steps or ideas to solve problems. • Decompose a complex problem into manageable parts. • Relate previously learned concepts to new concepts. • Look for similarities among problems. • Connect solutions of problems to more complicated large-scale situations. <p>Clarifications: Teachers who encourage students to use patterns and structure to help understand and connect mathematical concepts:</p> <ul style="list-style-type: none"> • Help students recognize the patterns in the world around them and connect these patterns to mathematical concepts. • Support students to develop generalizations based on the similarities found among problems. • Provide opportunities for students to create plans and procedures to solve problems. • Develop students' ability to construct relationships between their current understanding and more sophisticated ways of thinking. 	
<p>National Geographic Environmental Science <i>includes opportunities throughout the program for students to use patterns and structure. For example:</i> 1.4 LA p. 39 #5; 5 TIAT p. 152 #1; U2 UEP p. 194 #7; 8.4 LA p. 265 #5; 8 TIAT p. 272 #5; 8 CA p. 274 #17, #20; 9 CA pp. 324–325 #22, ACT-A Questions #3, ACT-B #1–3; 10 CA p. 359 ACT-A #9; 12 CA p. 419 ACT-A #1; 13.3 LA p. 451 #3</p>	
<p>MA.K12.MTR.6.1 Assess the reasonableness of solutions. Mathematicians who assess the reasonableness of solutions:</p> <ul style="list-style-type: none"> • Estimate to discover possible solutions. • Use benchmark quantities to determine if a solution makes sense. • Check calculations when solving problems. • Verify possible solutions by explaining the methods used. • Evaluate results based on the given context. <p>Clarifications: Teachers who encourage students to assess the reasonableness of solutions:</p> <ul style="list-style-type: none"> • Have students estimate or predict solutions prior to solving. • Prompt students to continually ask, “Does this solution make sense? How do you know?” • Reinforce that students check their work as they progress within and after a task. • Strengthen students' ability to verify solutions through justifications. 	
<p>National Geographic Environmental Science <i>includes opportunities throughout the program for students to assess reasonableness of solutions. For example:</i> U1 UEP p. 101 #11, #12; U2 UEP p. 195 #14–17, #20, #24; 10 CA p. 359 ACT-A #2–8; 11 TIAT p. 386 #2; 12 TIAT p. 416 #6</p>	

STUDENT/TEACHER EDITION	ONLINE RESOURCES
<p>MA.K12.MTR.7.1 Apply mathematics to real-world contexts. Mathematicians who apply mathematics to real-world contexts:</p> <ul style="list-style-type: none"> • Connect mathematical concepts to everyday experiences. • Use models and methods to understand, represent and solve problems. • Perform investigations to gather data or determine if a method is appropriate. • Redesign models and methods to improve accuracy or efficiency. <p>Clarifications: Teachers who encourage students to apply mathematics to real-world contexts:</p> <ul style="list-style-type: none"> • Provide opportunities for students to create models, both concrete and abstract, and perform investigations. • Challenge students to question the accuracy of their models and methods. • Support students as they validate conclusions by comparing them to the given situation. • Indicate how various concepts can be applied to other disciplines. 	
<p>National Geographic Environmental Science <i>includes opportunities throughout the program for students to apply mathematics to real-world contexts. For example:</i> 2 TIAT p. 62 #1–3; 3.2 LA p. 80 #3; U1 UEP p. 101 #10–12; 4 TIAT p. 128 #2–4; U2 UEP p. 195 #13–17, #20; 7.2 LA p. 231 #5; 7 CA p. 241 ACT-B; 8.5 LA p. 272 #5; U3 UEP p. 277 #21; 9 CA p. 325 ACT-A Develop Models #1, #3, Questions #1–4, ACT-B #2, #3; 10 TIAT p. 356 #2; 10 CA p. 359 ACT-A #2–9; 11 TIAT p. 386 #2; 11 CA p. 389 ACT-B; 12.2 LA p. 407 #3; 12.3 LA p. 415 #5; 12 TIAT p. 416 #1–5; 12 CA p. 419 ACT-A #3, #5, ACT-B; 13.1 LA p. 433 #4; 13 TIAT p. 452 #1, #5; 13 CA p. 455 ACT-A #1–7, #10; U4 UEP p. 456 #8, #9; 15.1 LA p. 504 #4; 18 CA p. 641 ACT-A #7</p>	<p>CI 1; CI 2; CI 3; CI 4; CI 5; CI 7; CI 8; CI 12; CI 13; CI 15</p>
<p>ELA.K12.EE.1.1 Cite evidence to explain and justify reasoning.</p> <p>Clarifications: K-1 Students include textual evidence in their oral communication with guidance and support from adults. The evidence can consist of details from the text without naming the text. During 1st grade, students learn how to incorporate the evidence in their writing. 2-3 Students include relevant textual evidence in their written and oral communication. Students should name the text when they refer to it. In 3rd grade, students should use a combination of direct and indirect citations. 4-5 Students continue with previous skills and reference comments made by speakers and peers. Students cite texts that they’ve directly quoted, paraphrased, or used for information. When writing, students will use the form of citation dictated by the instructor or the style guide referenced by the instructor. 6-8 Students continue with previous skills and use a style guide to create a proper citation. 9-12 Students continue with previous skills and should be aware of existing style guides and the ways in which they differ.</p>	
<p>National Geographic Environmental Science <i>includes opportunities throughout the program for students to cite evidence and justify reasoning. For example:</i> 1 EAW p. 16; 1.3 LA p. 35 #2, #3; 1.4 LA p. 39 #5; 1 CA p. 43 ACT-B; 2 EAW p. 46; 2.1 LA p. 54 #5; 2 CA p. 65 ACT-A #10; 3 EAW p. 68 TC; 3.1 SF p. 72 TC; 3.5 LA p. 96 #4; 3 TIAT p. 96 #6; U1 UEP p. 101 #11, #15, #17–19; 4.2 LA p. 119 #4; 4.3 p. 120; 4.4 p. 124; 4 TIAT p. 128 #4, #5; 4 CA pp. 130–131 #27, ACT-A #5, #6, ACT-B #1–6; 5 EAW p. 134 TC; 5.1 pp. 138–139, p. 141; 5.1 LA p. 141 #1–4; 5.2 pp. 142–143; 5.2 LA p. 144 #1–5; 5.3 pp. 150–151; 5.3 LA p. 151 #1–6; 5 TIAT p. 152 #1–3; 5 CA pp. 154–155 #20–32; 6 EAW p. 159 TC; 6.1 p. 161, p. 164, p. 166; 6.1 SF p. 165 TC; 6.1 LA p. 166 #1–6; 6.2 SF p. 169 TC; 6.2 p. 179; 6.2 LA p. 179 #1–5; 6.3 pp. 180–181, p. 184; 6.3 LA p. 185 #1, #3–5; 6.4 p. 189; 6.4 LA p. 189 #1–6; 6 TIAT p. 190 #3–6; 6 CA pp. 192–193 #13–20, #22, #24–27, ACT-A #3, #4, #6, ACT-B #2–4; U2 UEP pp. 194–195 #7, #18, #21–26; 9 TIAT p. 322 #3; 11 CA p. 389 ACT-B; 14 TIAT p. 494 #5; 14 CA p. 496 #21; 15.3 SF p. 514 TC; 15.5 LA p. 526 #5; 15 CA p. 528 #18–20; 16.2 LA p. 562 #5; 16.3 LA p. 569 #6; 16 TIAT p. 572 #6–8; 16 CA p. 574 #17–19; 17.2 LA p. 596 #4, #5; 18 EAW p. 614 TC; 18.1 SF p. 619 TC; 18.1 LA p. 620 #5; 18.2 p. 623; 18.2 LA p. 625 #5; 18.3 p. 634; 18.3 LA p. 634 #1–5; 18.4 LA p. 638 #3, #4; 18 TIAT p. 638 #1, #2, #4–7; 18 CA pp. 640–641 #15, #16, ACT-A #6; U5 UEP p. 643 #16–18</p>	

STUDENT/TEACHER EDITION	ONLINE RESOURCES
<p>ELA.K12.EE.2.1 Read and comprehend grade-level complex texts proficiently.</p> <p>Clarifications: See Text Complexity for grade-level complexity bands and a text complexity rubric. https://cpalmsmediaproduct.blob.core.windows.net/uploads/docs/standards/best/la/appendixb.pdf</p>	
<p>National Geographic Environmental Science <i>is medium-to-high text complexity. It includes opportunities throughout the program for students to demonstrate that they can read and comprehend the text proficiently. For example:</i> 4 CA p. 130 #14–18, #20–22, #24; 15 TIAT p. 526 #1; 17 EAW p. 578 TC; 17.1 LA p. 586 #4; 17.3 LA p. 604 #4; 18.1 p. 620; 18.1 LA p. 620 #1–5; 18.2 pp. 623–625; 18.2 LA p. 625 #1, #3–6; 18.3 p. 627, p. 630, p. 634; 18.3 LA p. 634 #1–3, #5; 18.4 p. 637; 18.4 LA p. 638 #1–4; 18 TIAT p. 638 #1–5; 18 CA p. 640 #1–18, #20</p>	<p>18 PTT #1–15</p>
<p>ELA.K12.EE.3.1 Make inferences to support comprehension.</p> <p>Clarifications: Students will make inferences before the words infer or inference are introduced. Kindergarten students will answer questions like “Why is the girl smiling?” or make predictions about what will happen based on the title page. Students will use the terms and apply them in 2nd grade and beyond.</p>	
<p>National Geographic Environmental Science <i>includes opportunities throughout the program for students to make inferences. For example:</i> 8 CA p. 275 ACT-A #4; 18 EAW p. 614 TC; 18.1 SF p. 619 TC; 18.1 LA p. 620 #2, #4, #5; 18.2 pp. 623–625; 18.2 LA p. 625 #3–6; 18.3 p. 630, p. 634; 18.3 LA p. 634 #1, #2, #4, #5; 18.4 p. 637; 18.4 LA p. 638 #1, #3, #4; 18 TIAT p. 638 #1–5; 18 CA pp. 640–641 #11–14, #17, #20, ACT-A #4, #6, #7</p>	
<p>ELA.K12.EE.4.1 Use appropriate collaborative techniques and active listening skills when engaging in discussions in a variety of situations.</p> <p>Clarifications: In kindergarten, students learn to listen to one another respectfully. In grades 1–2, students build upon these skills by justifying what they are thinking. For example: “I think _____ because _____.” The collaborative conversations are becoming academic conversations. In grades 3–12, students engage in academic conversations discussing claims and justifying their reasoning, refining and applying skills. Students build on ideas, propel the conversation, and support claims and counterclaims with evidence.</p>	
<p>National Geographic Environmental Science <i>includes opportunities throughout the program for students to collaborate and engage in active listening. For example:</i> 1.4 LA p. 39 #5; 1 CA pp. 42–43 #20, #22, #23, ACT-A #1; 2 CA p. 65 ACT-A #4, ACT-B; 3 TIAT p. 96 #6; U1 UEP p. 101 #5, #18; U2 UEP p. 194 #6; 12 CA p. 419 ACT-A #6; 18 CA p. 641 ACT-A #6, #7, ACT-B</p>	
<p>ELA.K12.EE.5.1 Use the accepted rules governing a specific format to create quality work.</p> <p>Clarifications: Students will incorporate skills learned into work products to produce quality work. For students to incorporate these skills appropriately, they must receive instruction. A 3rd grade student creating a poster board display must have instruction in how to effectively present information to do quality work.</p>	
<p>National Geographic Environmental Science <i>includes opportunities throughout the program for students to use accepted rules to create quality work. For example:</i> 2 CA p. 65 ACT-A #4–5; 3.3 LA p. 83 #4; 3.4 LA p. 92 #4; 6 TIAT p. 190 #3–4; 7.1 LA p. 220 #6; 7 CA p. 241 ACT-A #2; 9 CA p. 325 ACT-A #3, Questions #1–4; 11 CA p. 388 #21, p. 389 ACT-A #5; 12 CA p. 419 ACT-A #3–4, ACT-B; 12.3 LA p. 415 #5; U5 UEP p. 643 #19, #21; 15 TIAT p. 526 #1–6</p>	<p>CI 14; CI 15; CI 16; CI 17; CI 18</p>

STUDENT/TEACHER EDITION	ONLINE RESOURCES
<p>ELA.K12.EE.6.1 Use appropriate voice and tone when speaking or writing.</p> <p>Clarifications: In kindergarten and 1st grade, students learn the difference between formal and informal language. For example, the way we talk to our friends differs from the way we speak to adults. In 2nd grade and beyond, students practice appropriate social and academic language to discuss texts.</p>	
<p>National Geographic Environmental Science <i>includes opportunities throughout the program for students to use accepted rules to use appropriate voice and tone when speaking or writing. For example:</i> 12 CA p. 419 ACT-A #3–4, ACT-B; 14 CA p. 497 ACT-A Questions #5; 15 TIAT p. 526 #1–6; 17 CA p. 611 ACT-B; U5 UEP p. 643 #19, #21</p>	<p>CI 14; CI 15; CI 16; CI 17; CI 18</p>
<p>ELD.K12.ELL.SC.1 English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science.</p>	
<p>Okavango p. 6; U1 UO p. 13; 1 EAW p. 16; 1.1 p. 19; 1.2 p. 24; 1.3 p. 28; 1.3 p. 30; 2 EAW p. 46; 2.4 p. 61; 2 Summary p. 63; 2 CA p. 65; 3 EAW p. 68; 3.2 p. 74; 3.3 p. 81; 3.3 p. 82; U2 UO p. 103; 4 TIAT p. 128; 4.1 p. 113; 4.2 p. 117; 4.3 p. 120; 5 EAW p. 134; 5.1 p. 139; 5.1 p. 139; 5.3 p. 145; 6.1 p. 161; 6.2 p. 172; 6.3 p. 183; U2 p. 204 Partners in Sustainability; 7 EAW p. 210; 7.1 EAW p. 217; 7.2 p. 225; 7.3 p. 232; 7.3 p. 237; 8 EAW p. 244; 8.1 p. 247; 8.5 p. 266; 8 CA p. 274; U4 UO p. 279; 9.1 p. 288; 9.4 p. 311; 10 EAW p. 328; 10.2 p. 334; 10.3 p. 339; 10 TIAT p. 356; 11.1 p. 365; 11.2 p. 373; 11.3 p. 379; 11.3 p. 381; 12 CA p. 419; 12 EAW p. 393; 12.2 p. 397; 12.3 p. 410; 12.3 SF p. 409; 13 EAW p. 422; 13.1 p. 431; 13.2 p. 436; 13.2 p. 446; 13.3 EF p. 450; U4 p. 463 Citizen Science; U5 UO p. 469; 14.2 p. 481; 14.3 p. 482; 15.1 p. 503; 15.4 p. 520; 15.5 p. 522; 15.5 p. 525; 16 EAW p. 532; 17 EAW p. 578; 17.1 p. 581; 17.2 p. 587; 17.2 p. 591; 18.1 p. 617; 18.4 p. 635</p>	
<p>ELD.K12.ELL.SI.1 English language learners communicate for social and instructional purposes within the school setting.</p>	
<p>U1 UO p. 13; 1 EAW p. 16; 1.1 p. 19; 1.2 p. 24; 1.3 p. 28; 1.3 p. 30; 2.2 p. 61; 2 Summary p. 63; 2 CA p. 65; 3 EAW p. 68; 3.2 p. 74; 3.2 EF p. 79; 3.3 p. 81; 3.3 p. 82; U2 UO p. 103; 4 EAW p. 106; 4.1 p. 109; 4.1 p. 113; 4.3 p. 120; 4 TIAT p. 128; 5 EAW p. 134; 5.1 p. 139; 5.3 p. 145; 5.3 p. 147; 5.3 p. 149; 5 TIAT p. 152; 6.1 p. 161; 6.2 p. 168; 6.3 p. 183; U2 p. 204 Partners in Sustainability; U3 UO p. 207; 7 CA p. 240; 7.1 EAW p. 217; 7.3 p. 232; 7.3 p. 237; 8 EAW p. 244; 8.1 p. 247; 8.5 p. 266; 8.5 p. 269; 9 EAW p. 282; 9.1 p. 287; 9.1 p. 288; 9.3 p. 302; 10.2 p. 334; 10.3 p. 339; 10.4 p. 342; 10 TIAT p. 356; 11.1 p. 365; 11.1 p. 369; 11.2 p. 373; 11.3 p. 379; 11.3 p. 381; 12 EAW p. 393; 12.2 p. 397; 12.3 p. 410; 12.3 SF p. 409; 13 EAW p. 422; 13.1 p. 431; 13.2 p. 436; 13.2 p. 446; 13.3 EF p. 450; 14.2 p. 481; 14.3 p. 482; 14.4 p. 490; 14.4 p. 493; 14 Summary p. 495; 15.1 p. 503; 15.3 p. 513; 15.4 p. 520; 15.5 p. 522; 15 CA p. 528; 16 EAW p. 532; 16.2 p. 550; 16.2 p. 559; 16.3 p. 566; 17 EAW p. 578; 17.2 p. 587; 17.2 p. 591; 17.2 p. 594; 18.1 p. 617; 18 CA p. 640; 18 CA p. 641</p>	
<p>HE.912.C.1.3 Evaluate how environment and personal health are interrelated.</p> <p>Clarifications: Food options within a community; prenatal-care services; availability of recreational facilities; air quality; weather-safety awareness; and weather, air, and water conditions. 4 CA p. 130 #27; 9.1 pp. 285–286, p. 288; 9.1 LA p. 289 #1–5; 9.2 LA p. 301 #3; 9.3 p. 311; 9.3 LA p. 311 #2; 9.4 LA p. 314 #3; 9.5 LA p. 321 #3; 9 CA p. 324 #1, #4, #10, #14; 10.1 p. 331, p. 333; 10.1 LA p. 333 #3; 10.4 p. 342; 14.3 p. 485, p. 488; 14.4 p. 493; 15 CS p. 502; 15.2 p. 511; 16 CS p. 534; 16.1 p. 536, p. 538; 16.1 SF p. 544; 16.2 p. 546, p. 551, pp. 556–557, p. 560; 18.1 LA p. 620 #3; 18.2 pp. 623–625; 18.2 LA p. 625 #4; 18.3 p. 627; 18.4 LA p. 638 #3</p>	<p>CI 9; 9 PTT #1, #2; CI 10; CI 16; 18 PTT #5</p>