



Earth Science

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STANDARDS	PAGE REFERENCES
<p>Science As Inquiry requires students to combine processes and scientific knowledge with scientific reasoning and critical thinking to develop their understanding of science.</p>	
<p>8.2.1 By the end of eighth grade, students will develop the abilities needed to do scientific inquiry.</p>	
<ul style="list-style-type: none"> Identify questions and form hypotheses that can be examined through scientific investigations. 	<p>Student Edition: <i>Design Your Own Lab</i> 52-53, 200-201, 228-229, 350-351, 444-445, 532-533, 616-617, 746-747 <i>Lab</i> 136, 504-505, 680-681 Teacher Wraparound Edition: AIL 414, 562; IL 9, 193</p>
<ul style="list-style-type: none"> Design and conduct a scientific investigation. 	<p>Student Edition: <i>Lab</i> 24-25, 136, 221, 503, 680-681 <i>Design Your Own Lab</i> 52-53, 200-201, 228-229, 444-445, 532-533, 616-617, 746-747 Teacher Wraparound Edition: A 19, 261; IL 9</p>
<ul style="list-style-type: none"> Use appropriate tools and techniques to gather, analyze, and interpret data. 	<p>Student Edition: <i>MiniLAB</i> 11, 318 <i>Lab</i> 24-25, 67, 136, 259, 504-505, 608, 680-681 <i>Design Your Own Lab</i> 52-53, 200-201, 228-229, 444-445, 616-617 <i>Model and Invent Lab</i> 474-475</p>

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<ul style="list-style-type: none"> Given evidence, develop descriptions, explanations, predictions, and models. 	<p>Student Edition: <i>Lab 24-25</i>, 136, 503, 504-505, 585, 680-681 <i>Design Your Own Lab 52-53</i>, 200-201, 228-229, 350-351, 444-445, 532-533, 616-617, 746-747 <i>MiniLAB 247</i></p>
<ul style="list-style-type: none"> Show the relationship between evidence and explanations. 	<p>Student Edition: 6-11 <i>Lab 24-25</i>, 98, 260-261, 503, 504-505, 585, 608 <i>Launch Lab 33</i>, 119 <i>MiniLAB 63</i>, 285 <i>Design Your Own Lab 200-201</i>, 444-445, 616-617</p>
<ul style="list-style-type: none"> Recognize and analyze alternative explanations and predictions. 	<p>Student Edition: 29 #27 <i>Design Your Own Lab 228-229</i> <i>Communicating Your Data 585</i>, 608 Teacher Wraparound Edition: A 531, 533; EA 81, 261</p>
<ul style="list-style-type: none"> Communicate scientific procedures and explanations. 	<p>Student Edition: <i>Communicating Your Data 25</i>, 53, 229, 351, 503, 505, 533, 617 <i>Lab 136</i> <i>Design Your Own Lab 200-201</i>, 444-445 <i>Use the Internet Lab 290-291</i>, 414-415, 562-563, 650-651</p>
<ul style="list-style-type: none"> Use mathematics in scientific inquiry. 	<p>Student Edition: <i>Applying Math 108</i>, 192, 251, 317, 411, 457, 522, 544, 700 <i>Lab 279</i> <i>MiniLAB 699</i> <i>Model and Invent Lab 714-715</i> <i>Design Your Own Lab 746-747</i> Teacher Wraparound Edition: QD 735; R 381</p>

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<p>Earth and Space Science focuses on the science facts, concepts, principles, theories, and models that are important for all students to know, understand, and use.</p>	
<p>8.5.1 By the end of eighth grade, students will develop an understanding of the structure of the earth.</p>	
<ul style="list-style-type: none"> Investigate and describe the crust, mantle, and core of the earth. 	<p>Student Edition: 280, 309-311</p> <p>Teacher Wraparound Edition: CFU 311; DI 310; QD 310; UAA 310</p>
<ul style="list-style-type: none"> Investigate and describe how a combination of constructive and destructive forces create land forms. 	<p>Student Edition: 154-159, 182-187, 210-214, 215-220, 222-227, 280-289, 330-335, 336-343, 345-349</p> <p><i>National Geographic</i> 283 <i>Science Online</i> 347</p> <p>Teacher Wraparound Edition: ACT 283; LD 282; SJ 183; V 283</p>
<ul style="list-style-type: none"> Investigate and describe the composition of soils. 	<p>Student Edition: 188-194</p> <p><i>National Geographic</i> 189 <i>MiniLAB</i> 190 <i>Integrate Chemistry</i> 191 <i>Applying Math</i> 192 <i>Lab</i> 195</p> <p>Teacher Wraparound Edition: A 195; ACT 189; DI 189, 193; LD 192; TFYI 190; V 189; VL 193</p>
<ul style="list-style-type: none"> Investigate and describe the water cycle. 	<p>Student Edition: 437-438, 449 #19, #25, 451 #15-#17</p> <p><i>Launch Lab</i> 453</p> <p>Teacher Wraparound Edition: A 437, 438; CFU 461; IM 437; R 438; SCB 424E; SJ 437; VL 437</p>
<ul style="list-style-type: none"> Investigate and describe the composition of the atmosphere at different altitudes. 	<p>Student Edition: 426-433, 451 #22</p> <p><i>Science Online</i> 428</p> <p>Teacher Wraparound Edition: CFU 433; MM 432; R 433; TFYI 431; TPK 426; VL 427</p>

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<ul style="list-style-type: none"> Investigate and describe the influence of topography, location, and oceans on climate. 	<p>Student Edition: 484-487, 492-502, 509 #27, 509 #30, 511 #5-#7 <i>Applying Science</i> 486 <i>National Geographic</i> 494-495</p> <p>Teacher Wraparound Edition: A 487; CB 495; CFU 487; DIS 487; FF 486; R 487; SCB 482E; TFYI 486</p>
<ul style="list-style-type: none"> Investigate and describe the effect of living organisms on weathering and the atmosphere. 	<p>Student Edition: 182-187, 188-191, 196-199, 207 #20, 401, 432-433, 609-615 <i>National Geographic</i> 189 <i>Science Online</i> 197 <i>MiniLAB</i> 611</p> <p>Teacher Wraparound Edition: CC 184; DI 184, 198; SJ 611</p>
<p>8.5.2 By the end of eighth grade, students will develop an understanding of the earth's history.</p>	
<ul style="list-style-type: none"> Investigate and describe how earth processes that occur today (e.g., volcanism, weather, and erosion) are similar to those that occurred in the past. 	<p>Student Edition: 90-93, 109, 182-187, 215-220, 280-289, 340-343 <i>Science Online</i> 337</p> <p>Teacher Wraparound Edition: FF 218; IM 193, 360F, 496; SCB 482E; SJ 158; TC 208; TFYI 93</p>
<ul style="list-style-type: none"> Investigate and use the fossil record to provide evidence and explain how environmental conditions have changed. 	<p>Student Edition: 272-275, 362-369, 397-399 <i>MiniLAB</i> 274, 363 <i>Launch Lab</i> 361 <i>Model and Invent Lab</i> 382-383</p> <p>Teacher Wraparound Edition: A 383; ACT 367; DI 363, 368; SCB 360E; SJ 367; VL 368</p>
<p>8.5.3 By the end of eighth grade, students will develop an understanding of the earth in the solar system.</p>	
<ul style="list-style-type: none"> Investigate and list the components of the solar system. 	<p>Student Edition: 660-662, 671-674, 696-701, 702-709, 710-713 <i>Applying Math</i> 700 <i>MiniLAB</i> 704 <i>Model and Invent Lab</i> 714-715</p> <p>Teacher Wraparound Edition: ACT 703; CFU 701, 707; DI 692; QD 662, 698; V 672</p>

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<ul style="list-style-type: none"> Investigate and describe the motion of objects in the solar system that support the concepts of day, year, eclipses, and phases of the moon. 	<p>Student Edition: 660-665, 666-670, 687 #21 <i>Launch Lab</i> 659 <i>Science Online</i> 663, 669 <i>Lab</i> 675</p> <p>Teacher Wraparound Edition: DIS 669, 670; IM 658F; LD 670; QD 669; SCB 658E; USW 671; VL 668</p>
<ul style="list-style-type: none"> Investigate and describe the influence of gravity on objects in the solar system. 	<p>Student Edition: 527-530, 637, 685 #22, 690-694, 712, 721 #10, 736-738, 740 <i>MiniLAB</i> 699</p> <p>Teacher Wraparound Edition: A 699; QD 527; TFYI 529; V 693</p>
<ul style="list-style-type: none"> Investigate and describe the sun as the major source of energy that influences the atmosphere and the earth's surface. 	<p>Student Edition: 130, 435-438</p> <p>Teacher Wraparound Edition: A 438; SCB 424E; TC 424; TFYI 436</p>
<ul style="list-style-type: none"> Investigate and describe the effect of the tilt of the earth's axis on seasons. 	<p>Student Edition: 492-493, 663-665, 687 #16 <i>Section Review</i> 502 <i>Science Online</i> 665 <i>Lab</i> 680-681</p> <p>Teacher Wraparound Edition: ACT 663; AIL 680; IM 482F; QD 664; R 665</p>