

SCIENCE

A CLOSER LOOK

Correlation to Idaho Science Standards

GRADE 5



Macmillan/McGraw-Hill

Standard 1: Nature of Science	
Goal 1.1: Understand Systems, Order, and Organization	
Objective 1	
5.S.1.1.1 Compare and contrast different systems. (603.01.a)	pp. 24-29, 50-56, 72-81, 82-83, 84, 85, 88-95, 102-103, 140-151, 154-163, 184-189, 191, 194-203, 206-215, 216-217, 218-227, 230, 231, 306-307, 317, 332-335, 352-353, 370-371, 378-389, 392-403, 410-412, 440-453, 606-617, 665, 668-673, 682, 683
CL: E Content Limit: Compare one item to another; do not make multiple-item comparisons. Systems tested should be familiar to students. Systems that could be used to develop items include classroom systems (stations, seating plans, built-in operation schemes), games (tag, kick ball), school systems (student: teacher: principal), the water cycle, and body systems (skeletal, digestive, respiratory).	
Goal 1.2: Understand Concepts and Processes of Evidence, Models, and Explanations	
Objective 1	
5.S.1.2.1 Use observations and data as evidence on which to base scientific explanations and predictions. (603.02.a)	pp. 12, 21, 33, 39, 47, 50, 61, 65, 89, 99, 107, 110-111, 113, 120, 127, 155, 167, 183, 189, 207, 213, 219, 221, 239, 251, 261, 271, 283, 287, 301, 305, 315, 322, 349, 369, 381, 390, 393, 399, 421, 425, 431, 466, 489, 503, 512, 519, 533, 539, 541, 547, 557, 583, 589, 594, 597, 601, 604, 634, 637, 641, 649, 659, 669, 677, 681
CL: E Content Limit: Explanations and predictions are limited to directly described or illustrated information in the item.	
Objective 2	
5.S.1.2.2 Explain the difference between observation and inference. (603.02.b)	pp. 13, 33, 50, 61, 65, 73, 77, 89, 99, 113, 117, 121, 123, 141, 155, 157, 167, 171, 183, 189, 195, 207, 213, 219, 239, 251, 261, 269, 271, 283, 301, 322, 325, 349, 393, 407, 411, 441, 457, 483, 486-487, 489, 507, 513, 523, 529, 557, 583, 589, 597, 601, 607, 625, 631, 637, 641, 649, 669, 687
CL: Content Limit: None listed.	
Objective 3	
5.S.1.2.3 Use models to explain or demonstrate a concept. (603.02.c)	pp. 12, 27, 73, 117, 198, 248-249, 251, 255, 265, 268, 275, 287, 369, 399, 411, 431, 435, 441, 447, 457, 466, 468, 483, 493, 648
CL: Content Limit: None listed.	

Goal 1.3: Understand Constancy, Change, and Measurement	
Objective 1	
5.S.1.3.1 Analyze changes that occur in and among systems. (603.03.b)	pp. 24-29, 50-56, 57, 72-81, 82-83, 84, 85, 102-103, 140-151, 154-163, 184-189, 191, 194-203, 206-215, 216-217, 218-227, 230, 231, 306-307, 332-335, 352-353, 370-371, 382-389, 392-403, 410-412, 444, 606-617, 665, 668-673, 682, 683
CL: E Content Limit: Analysis is limited to changes directly described or illustrated in the item.	
Objective 2	
5.S.1.3.2 Measure in both U.S. Customary and International System of Measurement (metric system) units with an emphasis on the metric system. (603.03.c)	pp. 13, 47, 120, 157, 171, 192, 195, 219, 243, 255, 268, 341, 379, 479, 519, 541, 571, 575, 594-595, 601, 604, 651
CL: C Content Limit: Measurement should be in millimeters, centimeters, grams.	
Goal 1.4: Understand the Theory that Evolution is a Process that Relates to the Gradual Changes in the Universe and of Equilibrium as a Physical State	
Objective 1: No objectives at this grade level.	
Goal 1.5: Understand Concepts of Form and Function	
Objective 1	
5.S.1.5.1 Explain how the shape or form of an object or system is frequently related to its use or function. (603.05.a)	pp. 80, 81, 158, 159, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 213
CL: E Content Limit: Items are limited to very visual content, including the streamlining of a dolphin's body and the webbing on a duck's foot.	
Goal 1.6: Understand Scientific Inquiry and Develop Critical Thinking Skills	
Objective 1	
5.S.1.6.1 Write and analyze questions that can be answered by conducting scientific experiments. (604.01.a)	pp. 3, 21, 27, 30-31, 33, 39, 47, 50, 61, 65, 73, 77, 82-83, 89, 92, 99, 107, 110-111, 113, 117, 120-121, 123, 127, 141, 148, 155, 157, 164-165, 167, 171, 183, 189, 192-193, 195, 198, 204-205, 207, 213, 219, 221, 239, 243, 248-249, 251, 255, 261, 265, 268-269, 271, 275, 283, 287, 301, 305, 312-313, 315, 319, 322-323, 325, 329, 341, 349, 363, 369, 376-377, 379, 381, 390-391, 393, 399, 407, 411, 421, 425, 428-429, 431, 435, 441, 447, 457, 466, 468-469, 479, 483, 486-487, 489, 493, 503, 507, 512-513, 519, 523, 526-527, 529, 533, 538-539, 541, 547, 553, 557, 571, 575, 583, 589, 594-595, 597, 601, 604-605, 607, 611, 625, 631, 634-635, 637, 641, 648-649, 651, 659, 665, 669, 677, 681, 686-687

CL: C Content Limit: Content should be limited to questions including the amount of water required by bean seedlings grown in small containers for healthy growth, and the conditions necessary for painted lady butterfly larva to pupate.

Objective 2

5.S.1.6.2 Conduct scientific investigations using a control and a variable. (604.01.b)

pp. 13, 120, 183, 192, 391, 526-527, 538

CL: C Content Limit: Assessed in the classroom, not on the ISAT.

Objective 3

5.S.1.6.3 Select and use appropriate tools and techniques to gather and display data. (604.01.c)

pp. 21, 30-31, 39, 47, 65, 73, 82-83, 89, 107, 110-111, 120-121, 141, 157, 167, 171, 189, 192-193, 195, 207, 219, 243, 248-249, 255, 265, 268-269, 271, 283, 287, 301, 305, 315, 319, 322-323, 341, 349, 363, 376-377, 379, 390-391, 393, 421, 425, 428-429, 431, 435, 441, 447, 457, 468-469, 479, 489, 503, 507, 512-513, 519, 526-527, 529, 538-539, 541, 553, 571, 575, 583, 594-595, 595, 601, 604-605, 607, 611, 625, 631, 634-635, 637, 641, 648-649, 651, 665, 669, 677, 681, 686-687, R2, R3, R4, R5, R6, R7

CL: C Content Limit: Content should be limited to metric rulers, bar graphs, and basic tables.

Objective 4

5.S.1.6.4 Use evidence to analyze descriptions, explanations, predictions, and models. (604.01.d)

pp. 3, 21, 27, 30-31, 33, 39, 47, 50, 61, 65, 73, 77, 82-83, 89, 92, 99, 107, 110-111, 113, 117, 120-121, 123, 127, 141, 148, 155, 157, 164-165, 167, 171, 183, 189, 192-193, 195, 198, 204-205, 207, 213, 219, 221, 239, 243, 248-249, 251, 255, 261, 265, 268-269, 271, 275, 283, 287, 301, 305, 312-313, 315, 319, 322-323, 325, 329, 341, 349, 363, 369, 376-377, 379, 381, 390-391, 393, 399, 407, 411, 421, 425, 428-429, 431, 435, 441, 447, 457, 466, 468-469, 479, 483, 486-487, 489, 493, 503, 507, 512-513, 519, 523, 526-527, 529, 533, 538-539, 541, 547, 553, 557, 571, 575, 583, 589, 594-595, 597, 601, 604-605, 607, 611, 625, 631, 634-635, 637, 641, 648-649, 651, 659, 665, 669, 677, 681, 686-687

CL: E Content Limit: Students should be presented a set of evidence or series of observations and be asked to derive information or make predictions based on this evidence.

Objective 5	
5.S.1.6.5 State a hypothesis based on observations. (604.01.e)	pp. 5, 12, 287, 349, 634-635
CL: E Content Limit: When provided sequential graphics, students will be able to select the most logical hypothesis from a list of possible options.	
Objective 6	
5.S.1.6.6 Compare alternative explanations and predictions. (604.01.f)	pp. 13, 107, 164-165, 195, 207, 507, 523, 533, 553, 631, 641, 665
CL: E Content Limit: When provided sequential graphics and a set of possible explanations, students will be able to select the most logical explanation from a list of possible options.	
Objective 7	
5.S.1.6.7 Communicate scientific procedures and explanations. (604.01.g)	pp. 12, 21, 27, 33, 61, 92, 123, 141, 193, 198, 207, 221, 239, 265, 269, 305, 323, 341, 363, 376-377, 407, 457, 487, 489, 493, 503, 519, 553, 571, 597, 607, 687
CL: Content Limit: Assessed in the classroom, not on the ISAT.	
Goal 1.7: Understand That Interpersonal Relationships Are Important in Scientific Endeavors	
Objective 1: No objectives at this grade level.	
Goal 1.8: Understand Technical Communication	
Objective 1	
5.S.1.8.1 Read and follow technical instructions. (613.02.a)	pp. 30-31, 82-83, 110-111, 120-121, 164-165, 192-193, 204-205, 248-249, 268-269, 312-313, 322-323, 376-377, 390-391, 428-429, 468-469, 486-487, 512-513, 526-527, 538-539, 594-595, 604-605, 634-635, 648-649, 686-687
CL: C Content Limit: Assessed in the classroom, not on the ISAT.	
Standard 2: Physical Science	
Goal 2.1: Understand the Structure and Function of Matter and Molecules and Their Interactions	
Objective 1	
5.S.2.1.1 Describe the differences among elements, compounds, and mixtures. (605.01.a)	pp. 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500-501, 508, 509, 510, 511, 514, 515, 528-539, 542, 543, 549, 550, 551, 563
CL: D Content Limit: Students should be able to identify the characteristics of an element, compound, and mixture.	

Objective 2	
5.S.2.1.2 Compare the physical differences among solids, liquids and gases. (605.01.c)	pp. 484, 485
CL: D Content Limit: Students should be able to recognize the differences in molecular distance between a solid, a liquid, and a gas, as well as differences in basic molecular motion.	
Objective 3	
5.S.2.1.3 Explain the nature of physical change and how it relates to physical properties. (605.01.d)	pp. 520-521
CL: D Content Limit: Students should be able to recognize the change(s) in physical properties that take place when physical changes occur including ice melting into water and water being heated into steam.	
Goal 2.2: Understand Concepts of Motion and Forces	
Objective 1: No objectives at this grade level.	
Goal 2.3: Understand the Total Energy in the Universe is Constant	
Objective 1: No objectives at this grade level.	
Goal 2.4: Understand the Structure of Atoms	
Objective 1: No objectives at this grade level.	
Goal 2.5: Understand Chemical Reactions	
Objective 1: No objectives at this grade level.	
Standard 3: Biology	
Goal 3.1: Understand the Theory of Biological Evolution	
Objective 1: No objectives at this grade level.	
Goal 3.2: Understand the Relationship between Matter and Energy in Living Systems	
Objective 1	
5.S.3.2.1 Communicate how plants convert energy from the Sun through photosynthesis. (608.01.a)	pp. 54, 55, 56, 57, 84, 144, 145, 148, 149, 151, 153, 178, 216-217, 221, 224, TR44
CL: D Content Limit: Students will know that chlorophyll, carbon dioxide, and water are necessary for photosynthesis to occur. Additionally, students will know that the energy necessary to “power” the photosynthetic reaction is provided by the Sun.	
Goal 3.3: Understand the Cell is the Basis of Form and Function for All Living Things	
Objective 1	
5.S.3.3.1 Compare and contrast the structural differences between plant and animal cells. (606.01.b)	pp. 24, 25, 26, 27, 29, 30, 31, 85
CL: E Content Limit: Address only the readily observable organelles: cell wall, cell membrane, and chloroplast.	

Objective 2	
5.S.3.3.2 Explain the concept that traits are passed from parents to offspring. (606.01.c)	pp. 90, 123, 124, 126-127, 128
CL: D Content Limit: Traits should be limited to clearly observable characteristics including eye color, hair color and texture, and widow's peak.	
Standard 4: Earth and Space Systems	
Goal 4.1: Understand Scientific Theories of Origin and Subsequent Changes in the Universe and Earth Systems	
Objective 1	
5.S.4.1.1 Describe the interactions among the solid earth, oceans and atmosphere (erosion, climate, tectonics and continental drift). (609.01.a)	pp. 238B, 238-247, 248-249, 250B, 250-257, 258-259, 260B, 260-267, 268-269, 270B, 270-279, 280-281, 282B, 282-293, 294-295, 296, 297
CL: D Content Limit: The role wind and water play in erosion, different cloud types, and the formation of earthquakes and volcanoes can all be addressed.	
Goal 4.2: Understand Geo-chemical Cycles and Energy in the Earth System	
Objective 1	
5.S.4.2.1 Explain the rock cycle and identify the three classifications of rocks. (609.02.a)	pp. 306-307, 308, 309, 310, 312, 313
CL: D Content Limit: How sedimentary, igneous, and metamorphic rocks are formed.	
Standard 5: Personal and Social Perspectives; Technology	
Goal 5.1: Understand Common Environmental Quality Issues, Both Natural and Human Induced	
Objective 1	
5.S.5.1.1 Identify issues for environmental studies. (611.01.a)	pp. 190, 226, 227, 228, 320, 321, 324, 325, 326, 332, 333, 334, 335, 336, 337, 342, 346, 347, 350, 351, 355
CL: E Content Limit: Content should be limited to events in the local school or community environment including food waste from the hot lunch program, storm runoff entering a local stream, and the impact on grass color due to uneven watering of the school yard.	
Goal 5.2: Understand the Relationship between Science and Technology	
Objective 1	
5.S.5.2.1 Describe how science and technology are part of a student's life. (610.01.a)	pp. 130-131, 294-295, 352-353, 414-415
CL: Content Limit: None listed.	
Objective 2	
5.S.5.2.2 List examples of science and technology. (610.01.b)	pp. 130-131, 294-295, 352-353, 414-415
CL: Content Limit: None listed.	

Goal 5.3: Understand the Importance of Natural Resources and the Need to Manage and Conserve Them

Objective 1

5.S.5.3.1 Identify the differences between renewable and nonrenewable resources. (611.03.a)

pp. 190, 234-235, 298D, 308, 309, 310, 311, 314, 318, 319, 320, 321, 324, 325, 326, 327, 330, 331, 332, 333, 334, 335, 336, 337, 340, 341, 344, 345, 346, 347, 348, 349, 350, 351, 352-353, 354, 355

CL: E Content Limit: Content should be limited to issues within a school or local community including recycling programs for paper and aluminum and landfill issues.