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Science: A Closer Look

2011

Grade 3

Correlated with

**Illinois
Science State Goals
Early Elementary**

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STATE GOAL 11: Understand the processes of scientific inquiry and technological design to investigate questions, conduct experiments and solve problems.	
A. Know and apply the concepts, principles and processes of scientific inquiry.	
EARLY ELEMENTARY	
11.A.1a Describe an observed event.	pp. 12, 21, 26, 31, 35, 40, 41, 43, 53, 55, 69, 73, 81, 85, 93, 107, 114, 119, 127, 137, 151, 155, 161, 173, 191, 195, 207, 213, 217, 227, 231, 239, 243, 249, 259, 268, 279, 283, 293, 317, 319, 327, 334, 335, 339, 344-345, 347, 349, 363, 383, 387, 401, 407, 412, 417, 419, 422, 433, 443, 447, 479, 489, 499, 505, 516
11.A.1b Develop questions on scientific topics.	pp. 3, 21, 31, 40-41, 43, 53, 69, 81, 91, 107, 119, 133, 144-145, 151, 161, 173, 191, 203, 213, 227, 239, 249, 259, 268-269, 279, 289, 303, 317, 327, 334-335, 337, 347, 363, 373, 383, 397, 407, 417, 422-423, 433, 443, 450-451, 453, 463, 479, 489, 493, 496-497, 499, 511
11.A.1c Collect data for investigations using measuring instruments and technologies.	pp. 13, 81, 161, 213, 317, 339, 347, 373, 377, 380-381, 397, 417, 438, 443, 451, 469, 481
11.A.1d Record and store data using available technologies.	pp. 81, 107, 119, 144-145, 161, 286-287, 307, 317, 377, 443, 451
11.A.1e Arrange data into logical patterns and describe the patterns.	pp. 144-145, 303, 327, 443, 451, 463, 473
11.A.1f Compare observations of individual and group results.	pp. 13, 69, 85, 213, 246-247, 249, 268, 443, 463, 481
B. Know and apply the concepts, principles and processes of technological design.	
EARLY ELEMENTARY	
11.B.1a Given a simple design problem, formulate possible solutions.	pp. 144-145, 289, 443, 460-461, 463, 511
11.B.1b Design a device that will be useful in solving the problem.	pp. 203, 289, 443, 450-451, 463, 475, 486-487, 489, 511
11.B.1c Build the device using the materials and tools provided.	pp. 55, 293, 463, 469, 486-487
11.B.1d Test the device and record results using given instruments, techniques and measurement methods.	pp. 203, 283, 443, 463, 469, 486-487, 495, 511

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11.B.1e Report the design of the device, the test process and the results in solving a given problem.	pp. 289, 443, 460-461, 463
STATE GOAL 12: Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.	
A. Know and apply concepts that explain how living things function, adapt and change.	
EARLY ELEMENTARY	
12.A.1a Identify and describe the component parts of living things (e.g., birds have feathers; people have bones, blood, hair, skin) and their major functions.	pp. 28-29, 31, 32, 33, 34, 35, 36, 37, 38, 39, 42, 43, 44, 45, 46, 47, 48, 49, 50-51, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 64, 65, 70, 72, 73, 75, 76, 77, 102-103, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144-145, 146, 147, 449, 494, 506, R14, R15, R16, R17, R18, R19, R20, R21, R22, TR40, TR41
12.A.1b Categorize living organisms using a variety of observable features (e.g., size, color, shape, backbone).	pp. 12, 38, 39, 50-51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 64, 65
B. Know and apply concepts that describe how living things interact with each other and with their environment.	
EARLY ELEMENTARY	
12.B.1a Describe and compare characteristics of living things in relationship to their environments.	pp. 24, 25, 28-29, 108, 109, 118, 120, 121, 122, 123, 124, 125, 126, 128, 129, 146, 147, 184
12.B.1b Describe how living things depend on one another for survival.	pp. 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116-117, 146, 147
C. Know and apply concepts that describe properties of matter and energy and the interactions between them.	
EARLY ELEMENTARY	
12.C.1a Identify and compare sources of energy (e.g., batteries, the sun).	pp. 24, 36, 110, 116-117, 252, 253, 254, 255, 256-257, 322, 323, 456, 480, 481, 490, 491, 500, 511, 518, 521, TR40, TR44, TR54
12.C.1b Compare large-scale physical properties of matter (e.g., size, shape, color, texture, odor).	pp. 358-359, 360D, 362, 363, 364, 365, 366, 367, 368, 369, 372, 373, 374, 375, 376, 377, 378, 379, 380-381, 383, 384-389, 390, 391, 392, 393, TR56
D. Know and apply concepts that describe force and motion and the principles that explain them.	
EARLY ELEMENTARY	
12.D.1a Identify examples of motion (e.g., moving in a straight line, vibrating, rotating).	pp. 429, 430D, 436, 437, 438, 439, 443, 444, 445, 449, 474, TR60
12.D.1b Identify observable forces in nature (e.g., pushes, pulls, gravity, magnetism).	pp. 442, 443, 444, 445, 449, 450-451, 474, TR60

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E. Know and apply concepts that describe the features and processes of the Earth and its resources.	
EARLY ELEMENTARY	
12.E.1a Identify components and describe diverse features of the Earth’s land, water and atmospheric systems.	pp. 186-187, 188, 190, 191, 192, 193, 194, 195, 196, 197, 199, 200-201, 204, 205, 206, 207, 208, 209, 210-211, 212, 214, 215, 216, 217, 218, 219, 221, 222, 223, 258, 259, 260, 261, 262, 267, 280, 281, 288, 289, 294-295, 296, 297, 300-301, TR48
12.E.1b Identify and describe patterns of weather and seasonal change.	pp. 274-275, 276D, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286-287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300-301, 302, 303, 304, 305, 306, 307, 308, 309, 312, 313, 321, 324, TR52
12.E.1c Identify renewable and nonrenewable natural resources.	pp. 152, 153, 234, 236, 244, 245, 252, 253, 254, 255, 256-257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268-269, 270, 271, 414-415, 518, TR50, TR51
F. Know and apply concepts that explain the composition and structure of the universe and Earth’s place in it.	
EARLY ELEMENTARY	
12.F.1a Identify and describe characteristics of the sun, Earth and moon as familiar objects in the solar system.	pp. 314D, 316, 317, 318, 319-321, 322, 323, 326, 327, 328, 329, 330, 331, 332, 333, 334-335, 354, 355, TR54
12.F.1b Identify daily, seasonal and annual patterns related to the Earth’s rotation and revolution.	pp. 305, 316, 318, 319, 320, 321, 323, 337, 338, 339, 350, 354, 355, TR54
STATE GOAL 13: Understand the relationships among science, technology and society in historical and contemporary contexts.	
A. Know and apply the accepted practices of science.	
EARLY ELEMENTARY	
13.A.1a Use basic safety practices (e.g., not tasting materials without permission, “stop/drop/roll”).	pp. 14, 35, 43, 73, 81, 107, 114, 201, 298, 317, 323, 344, 349, 387, 407, 417, 461, 489, 494, 517
13.A.1b Explain why similar results are expected when procedures are done the same way.	pp. 3, 21, 31, 40-41, 43, 53, 69, 81, 91, 107, 119, 133, 144-145, 151, 161, 173, 191, 203, 213, 227, 239, 249, 259, 268-269, 279, 289, 303, 317, 327, 334-335, 337, 347, 363, 373, 383, 397, 407, 417, 422-423, 433, 443, 450-451, 453, 463, 479, 489, 493, 496-497, 499, 511

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13.A.1c Explain how knowledge can be gained by careful observation.	pp. 12, 21, 26, 31, 35, 40, 41, 43, 53, 55, 69, 73, 81, 85, 93, 107, 114, 119, 127, 137, 151, 155, 161, 173, 191, 195, 207, 213, 217, 227, 231, 239, 243, 249, 259, 268, 279, 283, 293, 317, 319, 327, 334, 335, 339, 344-345, 347, 349, 363, 383, 387, 401, 407, 412, 417, 419, 422, 433, 443, 447, 479, 489, 499, 505, 516
B. Know and apply concepts that describe the interaction between science, technology and society.	
EARLY ELEMENTARY	
13.B.1a Explain the uses of common scientific instruments (e.g., ruler, thermometer, balance, probe, computer).	pp. 26, 31, 40, 41, 53, 69, 81, 107, 119, 133, 144, 145, 161, 173, 200-201, 213, 231, 239, 243, 259, 268, 269, 307, 317, 334-335, 339, 347, 349, 363, 373, 380, 381, 383, 397, 407, 417, 422, 423, 438, 450, 460-461, 481, 486-487, 489, 496-497, 499, 511, 516, R2, R4, R5, R6, R7, R8, R9
13.B.1b Explain how using measuring tools improves the accuracy of estimates.	pp. 13, 81, 161, 213, 317, 339, 347, 373, 377, 380-381, 397, 417, 438, 443, 451, 469, 481
13.B.1c Describe contributions men and women have made to science and technology.	pp. 96-97, 130-131, 180-181, 245, 256-257, 333, 352-353, 355, 370-371, 379, 440-441, 471, 480, 481, 501, 513
13.B.1d Identify and describe ways that science and technology affect people’s everyday lives (e.g., transportation, medicine, agriculture, sanitation, communication occupations).	pp. 28-29, 300-301, 440-441, 508-509, 513, 518
13.B.1e Demonstrate ways to reduce, reuse and recycle materials.	pp. 156, 157, 158-159, 182, 183, 265, 266, 267, 270, 271, 426