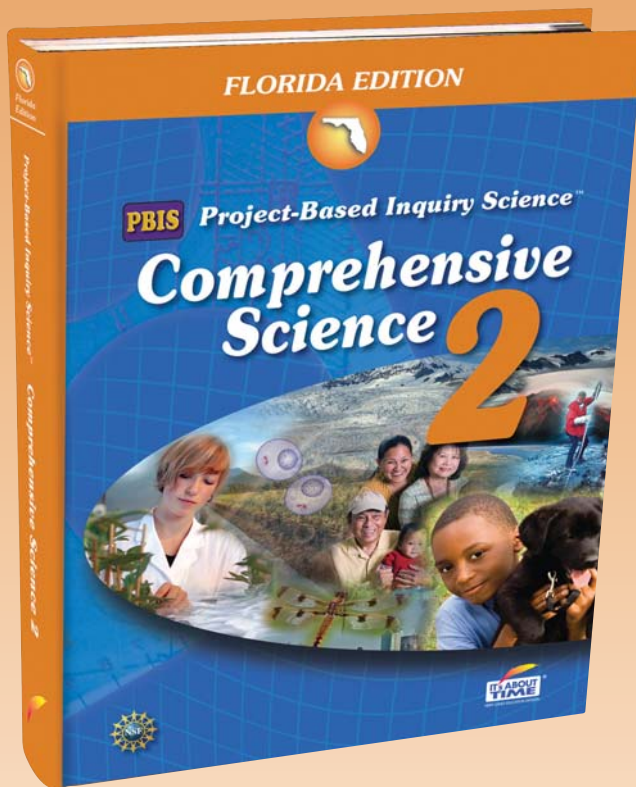




Florida Edition

Project-Based Inquiry Science Comprehensive Science 2

**CORRELATION
FLORIDA DEPARTMENT OF EDUCATION
INSTRUCTIONAL MATERIALS CORRELATION
COURSE STANDARDS**



Subject:	Science
Grade Level:	6–8
Course Title:	M/J Comprehensive Science 2
Course Code:	2002070
Title ID:	1796
Publisher ID:	35-1637714-01

Correlation of Florida Next Generation Sunshine State Standards to *Project-Based Inquiry Science: Comprehensive 2*

Florida Next Generation Sunshine State Standards	<i>Project-Based Inquiry Science: Comprehensive Science 2</i>
Scheme and Descriptor	
Strand: Health Literacy: CONCEPTS	
Standard 1: Comprehend concepts related to health promotion and disease prevention to enhance health.	
HE.6.C.1.4 Recognize how heredity can affect personal health.	Genetics LS4: pp. 200, 209-210
Strand: Literary Analysis	
Standard 2: Nonfiction	
LA.7.2.2.3 The student will organize information to show understanding (e.g., representing main ideas within text through charting, mapping, paraphrasing, summarizing, or comparing/contrasting).	<p>Animals in Action Introduction: pp. 7-10 LS1: pp. 21-25; 29-30; 36-37, 40-41 LS2: pp. 46, 48-50, 57-59, 70-71, 79, 82-83, 86-88, 92-93, 94-95, 98 LS3: pp. 101-103, 104, 106-109, 112, 115, 118-121, 124-125, 135-137, 138, 142-143, 145-146 Address the Big Challenge: pp. 148, 150, 154-155</p> <p>Ever-Changing Earth Introduction: pp. 28, 30-32 LS1: pp. 36-37, 42-46, 49-51, 58 LS2: pp. 62-63, 68, 80-82, 83-84, 88-90 LS3: pp. 94-95, 104, 128-130, 137-140, 146-148 LS4: pp. 151-152, 156-158, 169-170 LS5: pp. 174-176, 179, 187, 199, 203-206, 209, 211 LS6: pp. 218, 220, 246, 248 Answer the Big Question: pp. 249-250</p> <p>Living Together Introduction: pp. 12-13 LS1: pp. 15-16, 19-20, 22, 35-36, 47-49, 53, 54, 57-58, 60 LS2: pp. 63, 66-68, 70, 86, 90 LS3: pp. 93, 95-96, 108-109, 112-114, 118, 122, 125-135, 137-138, 143-144 Answer the Big Question: pp. 159-160</p> <p>Genetics Introduction: pp. 11-12 LS1: pp. 15, 18-19, 20-21, 33, 36 LS2: pp. 40-44, 47-48, 57, 73-75, 87, 90, 91, 92 LS3: pp. 100-102, 119, 139-140, 144, 163-164 LS4: pp. 170, 183, 190, 197, 211, 222-224 Address the Big Challenge: pp. 228-229 Answer the Big Question: pp. 232-234</p>

Scheme and Descriptor

Strand: Writing Applications

Standard 2: Informative

LA.7.4.2.2

The student will record information (e.g., observations, notes, lists, charts, legends) related to a topic, including visual aids to organize and record information and include a list of sources used.

Animals in Action

Introduction: pp. 7-10
 LS1: pp. 11; 21-25; 29-30; 36-37, 40-41
 LS2: pp. 46, 48-50, 57-59, 70-71, 79, 82-83, 86-88, 92-93, 94-95, 98
 LS3: pp. 101-103, 104, 106-109, 112, 115, 118-121, 124-125, 135-137, 138, 142-143, 145-146
 Address the Big Challenge: pp.148, 150-153

Ever-Changing Earth

Introduction: pp. 28, 30-32
 LS1: pp. 36-37, 42-46, 49-51, 58
 LS2: pp. 62-63, 68, 83-84, 88-90
 LS3: pp. 94-95, 104, 128-130, 137-140, 146-148
 LS4: pp. 151-152, 156-158, 169-170
 LS5: pp. 174-176, 179, 187, 203, 206, 209, 211
 LS6: pp. 218, 220, 246, 248
 Answer the Big Question: pp. 249-250

Living Together

Introduction: pp. 12-13
 LS1: pp. 15-16, 19-20, 22, 24-25, 35-36, 47-49, 53, 54, 57-58, 60
 LS2: pp. 63, 66-68, 70, 86, 90
 LS3: pp. 93, 95-96. 108-109, 112-114, 118, 122, 125-135, 137-138, 143-144
 Answer the Big Question: pp. 159-160

Genetics

Introduction: pp. 11-12
 LS1: pp. 15, 18-19, 20-21, 26, 33, 36
 LS2: pp. 40-44, 47-48, 57, 73-75, 87, 90, 91, 92
 LS3: pp. 100-102, 119, 139-140, 144, 163-164
 LS4: pp. 170, 183, 190, 197, 211, 222-224
 Address the Big Challenge: pp. 228-229
 Answer the Big Question: pp. 232-234

Big Idea 3: Write, interpret, and use mathematical expressions and equations.

MA.6.A.3.6

Construct and analyze tables, graphs, and equations to describe linear functions and other simple relations using both common language and algebraic notation.

Genetics

LS3: pp. 106-107, 108-111
 Using Mathematics to Record and Analyze Data

Scheme and Descriptor

Supporting Idea 6: Data Analysis

Data Analysis

MA.6.S.6.2

Select and analyze the measures of central tendency or variability to represent, describe, analyze, and/or summarize a data set for the purposes of answering questions appropriately.

Using Mathematics to Record and Analyze Data

Big Idea 6: Earth Structures

Over geologic time, internal and external sources of energy have continuously altered the features of Earth by means of both constructive and destructive forces. All life, including human civilization, is dependent on Earth’s internal and external energy and material resources.

SC.7.E.6.1

Describe the layers of the solid Earth, including the lithosphere, the hot convecting mantle, and the dense metallic liquid and solid cores.

Ever-Changing Earth

LS2: pp. 65-66, 71, 72-73, 76-78
LS4: pp. 153

SC.7.E.6.2

Identify the patterns within the rock cycle and relate them to surface events (weathering and erosion) and sub-surface events (plate tectonics and mountain building).

Ever-Changing Earth

LS5: pp. 190-192
More to Learn: pp. 212-214

SC.7.E.6.3

Identify current methods for measuring the age of Earth and its parts, including the law of superposition and radioactive dating.

Ever-Changing Earth

More to Learn: pp. 252-253
Genetics
LS3: pp. 122-123

SC.7.E.6.4

Explain and give examples of how physical evidence supports scientific theories that Earth has evolved over geologic time due to natural processes.

Ever-Changing Earth

More to Learn: pp. 251-252
Genetics
LS3: pp. 120-122

SC.7.E.6.5

Explore the scientific theory of plate tectonics by describing how the movement of Earth’s crustal plates causes both slow and rapid changes in Earth’s surface, including volcanic eruptions, earthquakes, and mountain building.

Ever-Changing Earth

LS2: pp. 60-63, 65-66, 74-75
LS3: pp. 92, 97-98, 106-107, 117, 123, 141, 144
LS4: pp. 150, 164-167
LS5: pp. 190-192, 194-198, 202, 203
LS6: pp. 216-218, 222, 224-233, 237-238, 241-243, 245-247
Answer the Big Question: pp. 249-250
More to Learn: pp. 254, 256-258

<p align="center">Florida Next Generation Sunshine State Standards</p>	<p align="center"><i>Project-Based Inquiry Science: Comprehensive Science 2</i></p>
<p align="center">Scheme and Descriptor</p>	
<p>SC.7.E.6.6 Identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water.</p>	<p>Living Together LS1: pp. 34, 37-40, 43-46, 50-52, 54-57, 59-60 LS2: pp. 64, 84-85 LS3: pp. 91, 100-104 Answer the Big Question and Address the Challenge: pp. 152-158</p> <p>Ever-Changing Earth LS2: pp. 65-66, 72-73, 74-75 LS3: pp. 97-103, 106-107, 114, 117, 123 LS5: pp. 172, 180-187, 190-193, 194-197, 202, 203 LS6: pp. 216-218, 222, 224-233, 239-240, 245-247</p> <p>Genetics LS3: pp. 137-138</p>
<p>SC.7.E.6.7 Recognize that heat flow and movement of material within Earth causes earthquakes and volcanic eruptions, and creates mountains and ocean basins.</p>	<p>Ever-Changing Earth LS2: pp. 65-66, 72-73, 74-75 LS3: pp. 97-103, 106-107, 114, 117, 123 LS5: pp. 172, 180-187, 190-193, 194-197, 202, 203 LS6: pp. 216-218, 222, 224-233, 239-240, 245-247</p>
<p align="center">Big Idea 10: Forms of Energy</p>	
<p>A: Energy is involved in all physical processes and is a unifying concept in many areas of science.</p>	
<p>B: Energy exists in many forms and has the ability to do work or cause a change.</p>	
<p>SC.7.P.10.1 Illustrate that the sun’s energy arrives as radiation with a wide range of wavelengths, including infrared, visible, and ultraviolet, and that white light is made up of a spectrum of many different colors.</p>	<p>Animals in Action LS2: pp. 72-73</p>
<p>SC.7.P.10.2 Observe and explain that light can be reflected, refracted, and/or absorbed.</p>	<p>Animals in Action LS2: p. 74</p>
<p>SC.7.P.10.3 Recognize that light waves, sound waves, and other waves move at different speeds in different materials.</p>	<p>Animals in Action LS2: pp. 74-75 LS3: pp. 122-123, 126-127, 138-139, 141</p> <p>Ever-Changing Earth LS2: p. 72 LS3: pp. 100-102</p>

Scheme and Descriptor

Big Idea 11: Energy Transfer and Transformations

A: Waves involve a transfer of energy without a transfer of matter.

B: Water and sound waves transfer energy through a material.

C: Light waves can travel through a vacuum and through matter.

D: The law of Conservation of energy: energy is conserved as it transfers from one object to another and from one form to another.

SC.7.P.11.1

Recognize that adding heat to or removing heat from a system may result in a temperature change and possibly a change of state.

Ever-Changing Earth

LS4: pp. 159-162

SC.7.P.11.2

Investigate and describe the transformation of energy from one form to another.

Animals in Action

LS1: p. 33

Ever-Changing Earth

LS3: p. 103

SC.7.P.11.3

Cite evidence to explain that energy cannot be created nor destroyed, only changed from one form to another.

Animals in Action

LS1: p. 33

Ever-Changing Earth

LS3: p. 103

SC.7.P.11.4

Observe and describe that heat flows in predictable ways, moving from warmer objects to cooler ones until they reach the same temperature.

Ever-Changing Earth

LS4: p. 159

Big Idea 15: Diversity and Evolution of Living Organisms

A: The theory of evolution is the organizing principle of life science.

B: The scientific theory of evolution is supported by multiple forms of evidence.

C: Natural selection is a primary mechanism leading to change over time in organisms.

SC.7.L.15.1

Recognize that fossil evidence is consistent with the scientific theory of evolution that living things evolved from earlier species.

Genetics

LS3: pp. 115-116, 120-123

LS4: p. 208

SC.7.L.15.2

Explore the scientific theory of evolution by recognizing and explaining ways in which genetic variation and environmental factors contribute to evolution by natural selection and diversity of organisms.

Genetics

LS3: pp. 116, 118

LS4: pp. 201-202, 208

<p style="text-align: center;">Florida Next Generation Sunshine State Standards</p>	<p style="text-align: center;"><i>Project-Based Inquiry Science: Comprehensive Science 2</i></p>
<p style="text-align: center;">Scheme and Descriptor</p>	
<p>SC.7.L.15.3 Explore the scientific theory of evolution by relating how the inability of a species to adapt within a changing environment may contribute to the extinction of that species.</p>	<p>Living Together LS3: p. 151 Genetics LS3: pp. 116 LS4: p. 208</p>
<p style="text-align: center;">Big Idea 16: Heredity and Reproduction</p>	
<p>A: Reproduction is characteristic of living things and is essential for the survival of species.</p>	
<p>B: Genetic information is passed from generation to generation by dna; dna controls the traits of an organism.</p>	
<p>C: Changes in the dna of an organism can cause changes in traits, and manipulation of dna in organisms has led to genetically modified organisms.</p>	
<p>SC.7.L.16.1 Understand and explain that every organism requires a set of instructions that specifies its traits, that this hereditary information (DNA) contains genes located in the chromosomes of each cell, and that heredity is the passage of these instructions from one generation to another.</p>	<p>Genetics LS2: pp. 54, 82, 84 LS4: pp. 165, 201-202, 206-207</p>
<p>SC.7.L.16.2 Determine the probabilities for genotype and phenotype combinations using Punnett Squares and pedigrees.</p>	<p>Genetics LS2: pp. 61-65, 67-69, 71-74</p>
<p>SC.7.L.16.3 Compare and contrast the general processes of sexual reproduction requiring meiosis and asexual reproduction requiring mitosis.</p>	<p>Genetics LS4: pp. 167, 179-181</p>
<p>SC.7.L.16.4 Recognize and explore the impact of biotechnology (cloning, genetic engineering, artificial selection) on the individual, society and the environment.</p>	<p>Genetics LS3: pp. 143 LS4: pp. 186-187, 207, 209-210, 213-218</p>
<p style="text-align: center;">Big Idea 17: Interdependence</p>	
<p>A: Plants and animals, including humans, interact with and depend upon each other and their environment to satisfy their basic needs.</p>	
<p>B: Both human activities and natural events can have major impacts on the environment.</p>	
<p>C: Energy flows from the sun through producers to consumers.</p>	
<p>SC.7.L.17.1 Explain and illustrate the roles of and relationships among producers, consumers, and decomposers in the process of energy transfer in a food web.</p>	<p>Living Together LS3: pp. 119-121, 139-141</p>

<p style="text-align: center;">Florida Next Generation Sunshine State Standards</p>	<p style="text-align: center;"><i>Project-Based Inquiry Science: Comprehensive Science 2</i></p>
<p style="text-align: center;">Scheme and Descriptor</p>	
<p>SC.7.L.17.2 Compare and contrast the relationships among organisms such as mutualism, predation, parasitism, competition, and commensalism.</p>	<p>Animals in Action LS2: pp. 44, 76-77</p> <p>Living Together LS3: pp. 120-122, 124, 139</p> <p>Genetics LS3: p. 103</p>
<p>SC.7.L.17.3 Describe and investigate various limiting factors in the local ecosystem and their impact on native populations, including food, shelter, water, space, disease, parasitism, predation, and nesting sites.</p>	<p>Living Together LS2: pp. 83-86 LS3: pp. 102-104, 106, 124-125, 127-135</p>
<p>Big Idea 1: The Practice of Science</p>	
<p>A: Scientific inquiry is a multifaceted activity: The processes of science include the formulation of scientifically investigable questions, construction of investigations into those questions, the collection of appropriate data, the evaluation of the meaning of those data, and the communication of this evaluation.</p>	
<p>B: The processes of science frequently do not correspond to the traditional portrayal of “the scientific method.”</p>	
<p>C: Scientific argumentation is a necessary part of scientific inquiry and plays an important role in the generation and validation of scientific knowledge.</p>	
<p>D: Scientific knowledge is based on observation and inference; it is important to recognize that these are very different things. Not only does science require creativity in its methods and processes, but also in its questions and explanations.</p>	
<p>SC.7.N.1.1 Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.</p>	<p>Ever-Changing Earth LS3: pp. 131-140 LS4: pp. 153-158 LS6: pp. 241-244</p> <p>Living Together LS2: pp. 64-68, 70 LS3: pp. 123-136 Answer the Big Question: pp. 152-160</p> <p>Genetics LS2: pp. 71-75, 76-81 LS3: pp. 95-97, 99-102, 103, 106-113, 124-128, 129-133, 134-140, 145-158, 160-164 LS4: pp. 171, 173-178</p>
<p>SC.7.N.1.2 Differentiate replication (by others) from repetition (multiple trials).</p>	<p>What Is Science? WS p. 2</p>

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<p align="center">Scheme and Descriptor</p>	
<p>SC.7.N.1.3 Distinguish between an experiment (which must involve the identification and control of variables) and other forms of scientific investigation and explain that not all scientific knowledge is derived from experimentation.</p>	<p>What Is Science? WS p. 2 Animals in Action LS1: pp. 12, 16, 22-23 Genetics LS3: pp. 114-117</p>
<p>SC.7.N.1.4 Identify test variables (independent variables) and outcome variables (dependent variables) in an experiment.</p>	<p>Living Together LS2: p. 65 Genetics LS3: pp. 132-133</p>
<p>SC.7.N.1.5 Describe the methods used in the pursuit of a scientific explanation as seen in different fields of science such as biology, geology, and physics.</p>	<p>Animals in Action LS1: pp. 12-13, 15-16 LS2: pp. 43, 53-55, 62 Answer the Big Question: pp. 156-157 Ever-Changing Earth LS2: pp. 67, 70 Living Together LS3: pp. 102-104, Answer the Big Question: pp. 155-156, 159-160 Genetics LS1: pp. 27-30</p>
<p>SC.7.N.1.6 Explain that the empirical evidence is the cumulative body of observations of a natural phenomenon on which scientific explanations are based.</p>	<p>What Is Science? WS p. 3 Genetics LS3: pp. 159-163</p>
<p>SC.7.N.1.7 Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community.</p>	<p>What Is Science? WS pp. 4-5 Animals in Action LS3: pp. 113-115 Genetics LS4: pp. 203-205, 207-209</p>

Scheme and Descriptor

Big Idea 2: The Characteristics of Scientific Knowledge

A: Scientific knowledge is based on empirical evidence, and is appropriate for understanding the natural world, but it provides only a limited understanding of the supernatural, aesthetic, or other ways of knowing, such as art, philosophy, or religion.

B: Scientific knowledge is durable and robust, but open to change.

C: Because science is based on empirical evidence it strives for objectivity, but as it is a human endeavor the processes, methods, and knowledge of science include subjectivity, as well as creativity and discovery.

SC.7.N.2.1

Identify an instance from the history of science in which scientific knowledge has changed when new evidence or new interpretations are encountered.

Animals in Action

LS2: pp. 54-56

LS3: pp. 113-114

Ever-Changing Earth

LS2: pp. 88

LS3: 105, 114

More to Learn: pp. 254-257

Living Together

LS3: p. 99

Genetics

LS3: pp. 114-117

LS4: pp. 165, 203, 204, 208

Big Idea 3: The Role of Theories, Laws, Hypotheses, and Models

The terms that describe examples of scientific knowledge, for example: “theory,” “law,” “hypothesis,” and “model” have very specific meanings and functions within science.

SC.7.N.3.2

Identify the benefits and limitations of the use of scientific models.

Animals in Action

LS2: pp. 62, 65

Ever-Changing Earth

LS1: pp. 35-37, 42-46, 55-58

LS4: pp. 156-157

Living Together

LS1: pp. 21-22

Genetics

LS2: p. 81

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