

FLORIDA SCIENCE STANDARDS

K-5 GRADE-LEVEL STANDARDS

AN ALIGNMENT WITH POLK COUNTY TEXTBOOKS



phillipmartin.info

FLORIDA SCIENCE STANDARDS: K-5 GRADE-LEVEL STANDARDS

The revised science standards include big ideas that flow throughout all grade levels and build in rigor as students move to higher grade levels. The eighteen big ideas used throughout this document are organized as follows:

Body of Knowledge: The Nature of Science Big Idea

Big Idea 1: The Practice of Science

Big Idea 2: The Characteristics of Scientific Knowledge

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

Big Idea 4: Science and Society

Body of Knowledge: Earth and Space Science

Big Idea 5: Earth in Space in Time

Big Idea 6: Earth Structures

Big Idea 7: Earth Systems and Patterns

Body of Knowledge: Physical Science

Big Idea 8: Properties of Matter

Big Idea 9: Changes in Matter

Big Idea 10: Forms of Energy

Big Idea 11: Energy Transfer and Transformations

Big Idea 12: Motion of Objects

Big Idea 13: Forces and Changes in Motion

Body of Knowledge: Life Science

Big Idea 14: Organization and Development of Living Organisms

Big Idea 15: Diversity and Evolution of Living Organisms

Big Idea 16: Heredity and Reproduction

Big Idea 17: Interdependence

Big Idea 18: Matter and Energy Transformations

Benchmark Coding Scheme

Body of Knowledge Key: N ~ Nature of Science E ~ Earth and Space Science P ~ Physical Science L ~ Life Science

Big Ideas Covered at Each Grade Level

Grade K

Big Idea 1 – The Practice of Science
Big Idea 5 – Earth in Space and Time
Big Idea 8 – Properties of Matter
Big Idea 9 – Changes in Matter
Big Idea 10 – Forms of Energy
Big Idea 12 – Motion of Objects
Big Idea 13 – Forces and Changes in Motion
Big Idea 14 – Organization and Development of Living Organisms

Grade 1

Big Idea 1 – The Practice of Science
Big Idea 5 – Earth in Space and Time
Big Idea 6 – Earth Structure
Big Idea 8 – Properties of Matter
Big Idea 12 – Motion of Objects
Big Idea 13 – Forces and Changes in Motion
Big Idea 14 – Organization and Development of Living Organisms
Big Idea 16 – Heredity and Reproduction
Big Idea 17 – Interdependence

Grade 2

Big Idea 1 – The Practice of Science
Big Idea 6 – Earth Structures
Big Idea 7 – Earth Systems and Patterns
Big Idea 8 – Properties of Matter
Big Idea 9 – Changes in Matter
Big Idea 10 – Forms of Energy
Big Idea 13 – Forces and Changes in Motion
Big Idea 14 – Organization and Development of Living Organisms
Big Idea 16 – Heredity and Reproduction
Big Idea 17 – Interdependence

Grade 3

Big Idea 1 – The Practice of Science
Big Idea 3 – The Role of Theories, Laws, Hypotheses, and Models
Big Idea 5 – Earth in Space and Time
Big Idea 6 – Earth Structures
Big Idea 8 – Properties of Matter
Big Idea 9 – Changes in Matter
Big Idea 10 – Forms of Energy
Big Idea 11 – Energy Transfer and Transformations
Big Idea 14 – Organization and Development of Living Organisms
Big Idea 15 – Diversity and Evolution of Living Organisms
Big Idea 17 – Interdependence

Grade 4

Big Idea 1 – The Practice of Science
Big Idea 2 – The Characteristics of Scientific Knowledge
Big Idea 3 – The Role of Theories, Laws, Hypotheses, and Models
Big Idea 5 – Earth in Space and Time
Big Idea 6 – Earth Structures
Big Idea 8 – Properties of Matter
Big Idea 9 – Changes in Matter
Big Idea 10 – Forms of Energy
Big Idea 11 – Energy Transfer and Transformations
Big Idea 12 – Motion of Objects
Big Idea 16 – Heredity and Reproduction
Big Idea 17 – Interdependence

Grade 5

Big Idea 1 – The Practice of Science
Big Idea 2 – The Characteristics of Scientific Knowledge
Big Idea 5 – Earth in Space and Time
Big Idea 7 – Earth Systems and Patterns
Big Idea 8 – Properties of Matter
Big Idea 9 – Changes in Matter
Big Idea 10 – Forms of Energy
Big Idea 11 – Energy Transfer and Transformations
Big Idea 13 – Forces and Changes in Motion
Big Idea 14 – Organization and Development of Living Organisms
Big Idea 15 – Diversity and Evolution of Living Organisms
Big Idea 17 – Interdependence

Grade 6

- Big Idea 1 – The Practice of Science
- Big Idea 2 – The Characteristics of Scientific Knowledge
- Big Idea 3 – The Role of Theories, Laws, Hypotheses, and Models
- Big Idea 6 – Earth Structures
- Big Idea 7 – Earth Systems and Patterns
- Big Idea 11 – Energy Transfer and Transformations
- Big Idea 12 – Motion of Objects
- Big Idea 13 – Forces and Changes in Motion
- Big Idea 14 – Organization and Development of Living Organisms
- Big Idea 15 – Diversity and Evolution of Living Organisms

Grade 7

- Big Idea 1 – The Practice of Science
- Big Idea 2 – The Characteristics of Scientific Knowledge
- Big Idea 3 – The Role of Theories, Laws, Hypotheses, and Models
- Big Idea 6 – Earth Structures
- Big Idea 10 – Forms of Energy
- Big Idea 11 – Energy Transfer and Transformations
- Big Idea 15 – Diversity and Evolution of Living Organisms
- Big Idea 16 – Heredity and Reproduction
- Big Idea 17 – Interdependence

Grade 8

- Big Idea 1 – The Practice of Science
- Big Idea 2 – The Characteristics of Scientific Knowledge
- Big Idea 3 – The Role of Theories, Laws, Hypotheses, and Models
- Big Idea 4 – Science and Society
- Big Idea 5 – Earth in Space and Time
- Big Idea 8 – Properties of Matter
- Big Idea 9 – Changes in Matter
- Big Idea 18 – Matter and Energy Transformations

BIG IDEA 1: The Practice of Science



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.

B: The processes of science frequently do not correspond to the traditional portrayal of "the scientific method."

C: Scientific argumentation is a necessary part of scientific inquiry and plays an important role in the generation and validation of scientific knowledge.

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.

Body of Knowledge: The Nature of Science

Big Idea 1: The Practice of Science

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.N.1.1 Collaborate with a partner to collect information.</p> <p>Ciencias 1 (Serie Amigos) TG: pages 25, 30, 38, 40-41, 49, 54-55, 61, 67, 78, 85, 90-91, 127, 134, 136-137 SB: pages 28-29, 46-47, 66-67, 76-77, 98-99, 118-119, 135AB, 136-137, 156-157, 188-189, 204-205, 224-225, 245-246, 254-255, 276-277, 296-297, 304-305, 326-327, 346-347, 358-359 WB: pages 11, 23, 41, 53, 59, 65</p> <p>Rourke Resources: <i>¿Qué se puede hacer con el agua?</i> <i>(What Can You Do With Water?)</i> <i>Conozco a un científico (I know a scientist)</i> <i>Puré de papas (Mashed Potatoes) eBook</i></p>	<p>SC.1.N.1.1 Raise questions about the natural world, investigate them in teams through free exploration, and generate appropriate explanations based on those explorations.</p> <p>Ciencias 1 (Serie Amigos) TG: pages 25, 30, 38, 40-41, 49, 54-55, 61, 67, 78, 85, 90-91, 127, 134, 136-137 SB: pages 28-29, 46-47, 66-67, 76-77, 98-99, 118-119, 135AB, 136-137, 156-157, 188-189, 204-205, 224-225, 245-246, 254-255, 276-277, 296-297, 304-305, 326-327, 346-347, 358-359 WB: pages 11, 23, 41, 53, 59, 65</p> <p>Rourke Resources: <i>Vamos a clasificar (Sorting It All Out)</i></p>	<p>SC.2.N.1.1 Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations.</p> <p>Ciencias 2 (Serie Amigos) TG: pages 26, 31, 33, 38, 43, 55, 57, 62, 63, 65, 80, 81, 85, 88-89, 97, 103, 105, 111, 125, 127, 131, 133, 138, 140-141 SB: pages 26-27, 38-39, 44, 46-47, 56-57, 60-61, 68-69, 98-99, 108, 122-123, 128-129, 162-163, 172-173, 1180-181, 190-191, 200-201, 222-223, 238-239, 246-247, 256-257, 286-287, 294-295, 302-303, 310-311, 322-323, 330-331 WB: pages 7, 9, 11, 13, 15, 17, 23, 29, 35, 41, 47, 53, 59, 65, 71, 77, 83, 89, 95</p> <p>Rourke Resources: <i>¿Frío o caliente?</i> <i>(What Is Hot? What Is Not?)</i></p>	<p>SC.3.N.1.1 Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.</p> <p>Ciencias 3 (Serie Amigos) TG pages: 27, 32, 33, 35-39, 42-43, 47-49, 50-51, 53-57, 59-61, 63-65, 67 SB pages: 32-33, 44-45, 48-49, 51-59, 62, 66-67, 80-87, 90, 92-93, 95-101, 104-105, 107-109, 112-121, 125-130, 132-133, 138 WB pages: 13-15, 17, 18-22, 24-27, 30, 32, 37-39, 42, 45-46</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke’s World of Science Encyclopedia, Volume 10: Research Projects)</i></p>	<p>SC.4.N.1.1 Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information (identifying the source), conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.</p> <p>Ciencias 4 (Serie Amigos) TG pages: 20-25 SB pages: 15, 19, 23, 27, 35, 37, 41, 49, 53, 57, 67, 71, 77, 83, 87, 92-93, 103, 105, 119, 123, 129, 136, 157, 171, 187, 191, 205, 223, 229, 239, 243, 257, 265, 273, 281, 291, 298. WB pages: 9, 12, 13, 14, 15, 18, 19, 22, 25, 29, 35, 38, 39, 47, 50, 55, 63, 66, 68, 70, 78-79, 82, 91, 94, 97, 99, 107.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke’s World of Science Encyclopedia, Volume 10: Research Projects)</i></p>	<p>SC.5.N.1.1 Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.</p> <p>Ciencias 5 (Serie Amigos) TG pages: 62, 74, 75 SB pages: 144-145, 178-179 WB pages: 9, 15, 29, 40, 51, 60, 76, 99</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke’s World of Science Encyclopedia, Volume 10: Research Projects)</i></p>

Body of Knowledge: The Nature of Science
Big Idea 1: The Practice of Science (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.N.1.2 Make observations of the natural world and know that they are descriptors collected using the five senses.</p> <p>Ciencias 1 (Serie Amigos) TG: pages 44-45, 47-49, 50-51, 53-54, 56, 57, 58-61, 63, 64-66, 67-68, 69 SB: pages 82-89, 92-97, 102-103, 111-117, 123, 126, 129-135, 146, 149-155, 158-159, 163, 164, 166-167 WB: pages 24, 26-27, 29, 30, 34, 35, 38-39, 42-43, 46, 47</p> <p>Rourke Resources: <i>Hierba se escribe con H (G Is For Grass)</i> <i>Insectos (Insects)</i> <i>Colores vivos (Living Colors)</i> <i>Haz que se mueva (Making Things Move)</i> <i>Plantas que alimentan (Plant Foods)</i> <i>¿Qué se puede hacer con el agua? (What Can You Do With Water?)</i> <i>Insectos (Insects) eBook</i> <i>A partir de un huevo (From An Egg) eBook</i></p>	<p>SC.1.N.1.2 Using the five senses as tools, make careful observations, describe objects in terms of number, shape, texture, size, weight, color, and motion, and compare their observations with others.</p> <p>Ciencias 1 (Serie Amigos) TG: pages 45, 48-49, 50, 53-54, 57-60, 62, 65-66, 67, 69 SB: pages 89C, 95, 97, 100-103, 113, 114-117, 118 (Destrezas), 125, 130-131, 133, 140, 141, 150-155, 158-159, 166 WB: pages 26-27, 29, 30, 34-35, 36, 39, 42, 44, 46, 47</p> <p>Rourke Resources: <i>¿Qué es la ciencia? (What Is Science?)</i> <i>Cosas pegajosas (Sticky Stuff)</i> <i>¿Cuánto mide el gusano medidor? (Is an Inchworm an Inch?) eBook</i> <i>Una docena de primos (A dozen cousins) eBook</i></p>	<p>SC.2.N.1.2 Compare the observations made by different groups using the same tools.</p> <p>Ciencias 2 (Serie Amigos) TG: pages 26, 31, 33, 38, 43, 55, 57, 62, 63, 65, 80, 81, 85, 88-89, 97, 103, 105, 111, 125, 127, 131, 133, 138, 140-141 SB: pages 26-27, 38-39, 44, 46-47, 56-57, 60-61, 68-69, 98-99, 108, 122-123, 128-129, 162-163, 172-173, 1180-181, 190-191, 200-201, 222-223, 238-239, 246-247, 256-257, 286-287, 294-295, 302-303, 310-311, 322-323, 330-331 WB: pages 7, 9, 11, 13, 15, 17, 23, 29, 35, 41, 47, 53, 59, 65, 71, 77, 83, 89, 95.</p> <p>Rourke Resources: <i>¿Cuánto mide el gusano medidor? (Is an Inchworm an Inch?) eBook</i></p>	<p>SC.3.N.1.2 Compare the observations made by different groups using the same tools and seek reasons to explain the differences across groups.</p> <p>Ciencias 3 (Serie Amigos) TG pages: 27, 32, 33, 37-39, 42-43, 48, 50-51, 55, 57, 61, 67-69, 78, 84, 87, 92, 94, 99, 101, 110, 113, 118, 119, 127, 131, 138-139. SB pages: 32-33, 44-45, 48-49, 56-57, 62-63, 84-85, 92-93, 100-101, 108-109, 120-121, 128-129, 138-140-141, 162-163, 178-179, 185, 194-195, 201, 208-209, 217, 238-239, 246-247, 256-257, 262-263, 282-283, 292-293, 299, 302-303 WB pages: 11, 17, 23, 29, 35, 41, 47, 53, 59, 65, 71, 77, 83, 89, 95</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke’s World of Science Encyclopedia, Volume 10: Research Projects)</i> <i>¿Cuánto mide el gusano medidor? (Is an Inchworm an Inch?) eBook</i></p>	<p>SC.4.N.1.2 Compare the observations made by different groups using multiple tools and seek reasons to explain the differences across groups.</p> <p>Ciencias 4 (Serie Amigos) TG pages: 26-31 SB pages: 18, 22, 25, 26, 34, 40, 52, 56, 70, 74, 90, 91, 108, 109, 126-127, 139, 142, 154, 161, 165, 175, 178, 179, 194, 195, 208, 209, 212, 225, 246, 261, 264, 274, 277, 280, 284, 295, 299-301</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke’s World of Science Encyclopedia, Volume 10: Research Projects)</i></p>	<p>SC.5.N.1.2 Explain the difference between an experiment and other types of scientific investigation.</p> <p>Ciencias 5 (Serie Amigos) TG pages: 41, 57, 61, 75, 78, 96, 106, 112 SB pages: 31, 37, 45, 51, 58, 69, 73, 85, 89, 102, 135, 144-145, 155, 169, 173, 188, 191, 207, 222, 237, 241, 255, 259, 273, 277, 290, 293 WB pages: 15, 25, 29, 37, 47, 60, 65, 74, 85, 93, 99, 103, 111</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke’s World of Science Encyclopedia, Volume 10: Research Projects)</i></p>

Body of Knowledge: The Nature of Science

Big Idea 1: The Practice of Science (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.N.1.3 Keep records as appropriate -- such as pictorial records -- of investigations conducted.</p> <p>Ciencias 1 (Serie Amigos) TG: pages 25, 30, 38, 40-41, 49, 54-55, 61, 67, 78, 85, 90-91, 127, 134, 136-137 SB: pages 28-29, 46-47, 66-67, 76-77, 98-99, 118-119, 135AB, 136-137, 156-157, 188-189, 204-205, 224-225, 245-246, 254-255, 276-277, 296-297, 304-305, 326-327, 346-347, 358-359 WB: pages 11, 23, 41, 53, 59, 65</p> <p>Rourke Resources: <i>¿Qué se puede hacer con el agua?</i> <i>(What Can You Do With Water?)</i> <i>¿Cuánto mide el gusano medidor?</i> <i>(Is an Inchworm an Inch?) eBook</i> <i>Deditos pegajosos (Sticky Fingers) eBook</i></p>	<p>SC.1.N.1.3 Keep records as appropriate - such as pictorial and written records - of investigations conducted.</p> <p>Ciencias 1 (Serie Amigos) TG: pages 25, 30, 38, 40-41, 49, 54-55, 61, 67, 78, 85, 90-91, 127, 134, 136-137 SB: pages 28-29, 46-47, 66-67, 76-77, 98-99, 118-119, 135AB, 136-137, 156-157, 188-189, 204-205, 224-225, 245-246, 254-255, 276-277, 296-297, 304-305, 326-327, 346-347, 358-359 WB: pages 11, 23, 41, 53, 59, 65</p> <p>Rourke Resources: <i>¿Qué es la ciencia?</i> <i>(What Is Science?)</i> <i>¿Cuánto mide el gusano medidor?</i> <i>(Is an Inchworm an Inch?) eBook</i></p>	<p>SC.2.N.1.3 Ask "how do you know?" in appropriate situations and attempt reasonable answers when asked the same question by others.</p> <p>Ciencias 2 (Serie Amigos) TG: pages 26, 31, 33, 38, 43, 55, 57, 62, 63, 65, 80, 81, 85, 88-89, 97, 103, 105, 111, 125, 127, 131, 133, 138, 140-141 SB: pages 26-27, 38-39, 44, 46-47, 56-57, 60-61, 68-69, 98-99, 108, 122-123, 128-129, 162-163, 172-173, 1180-181, 190-191, 200-201, 222-223, 238-239, 246-247, 256-257, 286-287, 294-295, 302-303, 310-311, 322-323, 330-331 WB: pages 7, 9, 11, 13, 15, 17, 23, 29, 35, 41, 47, 53, 59, 65, 71, 77, 83, 89, 95</p> <p>Rourke Resources: <i>Más helado</i> <i>(More Ice Cream) eBook</i></p>	<p>SC.3.N.1.3 Keep records as appropriate, such as pictorial, written, or simple charts and graphs, of investigations conducted.</p> <p>Ciencias 3 (Serie Amigos) TG pages: 27, 32, 33, 37-38, 39, 42-43, 48, 50-51, 55, 57, 61, 67-69, 78, 84, 87, 92, 94, 99, 101, 110, 113, 118, 119, 127, 131, 138-139 SB pages: 32-33, 44-45, 48-49, 56-57, 62-63, 84-85, 92-93, 100-101, 108-109, 120-121, 128-129, 138-139, 140-141, 162-163, 178-179, 185, 194-195, 201, 208-209, 217, 238-239, 246-247, 256-257, 262-263, 282-283, 292-293, 299, 302-303. WB pages: 11, 17, 23, 29, 35, 41, 47, 53, 59, 65, 71, 77, 83, 89, 95</p> <p>Rourke Resources: <i>Juntamos las partes</i> <i>(Put It Together)</i> <i>Midamos nuestro entorno</i> <i>(Measuring Our World)</i></p>	<p>SC.4.N.1.3 Explain that science does not always follow a rigidly defined method ("the scientific method") but that science does involve the use of observations and empirical evidence.</p> <p>Ciencias 4 (Serie Amigos) TG pages: 26-31 SB pages: 18, 22, 25, 26, 34, 40, 52, 56, 70, 74, 90, 91, 108, 109, 126-127, 139, 142, 154, 161, 165, 175, 178, 179, 194, 195, 208, 209, 212, 225, 246, 261, 264, 274, 277, 280, 284, 295, 299-301</p> <p>Rourke Resources: <i>Patrones de la naturaleza</i> <i>(Patterns In Nature)</i> <i>Juntamos las partes</i> <i>(Put It Together)</i></p>	<p>SC.5.N.1.3 Recognize and explain the need for repeated experimental trials.</p> <p>Ciencias 5 (Serie Amigos) TG pages: 41, 57, 61, 75, 78, 96, 106, 112 SB pages: 31, 37, 45, 51, 58, 69, 73, 85, 89, 102 WB pages: 15, 25, 29, 37, 47, 60, 65, 74, 85, 93, 99, 103, 111</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación</i> <i>(Rourke's World of Science Encyclopedia, Volume 10: Research Projects)</i></p>

Body of Knowledge: The Nature of Science
Big Idea 1: The Practice of Science (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.N.1.4 Observe and create a visual representation of an object which includes its major features.</p> <p><i>Ciencias 1 (Serie Amigos)</i> TG: pages 46-51 SB: pages 91-105, 108-109 WB: pages 25-27, 28-29</p> <p>Rourke Resources: <i>Características de la naturaleza (Our Attribute Walk)</i> <i>Figuras y patrones que conocemos (Shapes and Patterns we Know)</i> <i>eBook</i> <i>De lado a lado (Taking sides)</i> <i>eBook</i></p>	<p>SC.1.N.1.4 Ask "how do you know?" in appropriate situations.</p> <p><i>Ciencias 1 (Serie Amigos)</i> TG: pages 25, 30, 38, 40-41, 49, 54-55, 61, 67, 78, 85, 90-91, 127, 134, 136-137. SB: pages 28-29, 46-47, 66-67, 76-77, 98-99, 118-119, 135AB, 136-137, 156-157, 188-189, 204-205, 224-225, 245-246, 254-255, 276-277, 296-297, 304-305, 326-327, 346-347, 358-359 WB: pages 11, 23, 41, 53, 59, 65</p> <p>Rourke Resources: <i>¿Qué es la ciencia? (What Is Science?)</i> <i>Cosas pegajosas (Sticky Stuff)</i></p>	<p>SC.2.N.1.4 Explain how particular scientific investigations should yield similar conclusions when repeated.</p> <p><i>Ciencias 2 (Serie Amigos)</i> TG: pages 26, 31, 33, 38, 43, 55, 57, 62, 63, 65, 80, 81, 85, 88-89, 97, 103, 105, 111, 125, 127, 131, 133, 138, 140-141 SB: pages 26-27, 38-39, 44, 46-47, 56-57, 60-61, 68-69, 98-99, 108, 122-123, 128-129, 162-163, 172-173, 180-181, 190-191, 200-201, 222-223, 238-239, 246-247, 256-257, 286-287, 294-295, 302-303, 310-311, 322-323, 330-331 WB: pages 7, 9, 11, 13, 15, 17, 23, 29, 35, 41, 47, 53, 59, 65, 71, 77, 83, 89, 95</p>	<p>SC.3.N.1.4 Recognize the importance of communication among scientists.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG pages: 27, 32, 33, 35-39, 42-43, 47-51, 53-57, 59-61, 63-65, 67 SB pages: 32-33, 44-45, 48-49, 51-59, 62, 66-67, 80-87, 90, 92-93, 95-101, 104-105, 107-109, 112-121, 125-130, 132-133, 138 WB pages: 13-15, 17-22, 24-27, 30, 32, 37-39, 42, 45-46</p>	<p>SC.4.N.1.4 Attempt reasonable answers to scientific questions and cite evidence in support.</p> <p><i>Ciencias 4 (Serie Amigos)</i> TG pages: 26-31 SB pages: 18, 22, 25, 26, 34, 40, 52, 56, 70, 74, 90, 91, 108, 109, 126-127, 139, 142, 154, 161, 165, 175, 178, 179, 194, 195, 208, 209, 212, 225, 246, 261, 264, 274, 277, 280, 284, 295, 299-301</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke's World of Science Encyclopedia, Volume 10: Research Projects)</i></p>	<p>SC.5.N.1.4 Identify a control group and explain its importance in an experiment.</p> <p><i>Ciencias 5 (Serie Amigos)</i> TG pages: 41, 57, 61, 75, 78, 96, 106, 112 SB pages: 31, 37, 45, 51, 58, 69, 73, 85, 89, 102 WB pages: 15, 25, 29, 37, 47, 60, 65, 74, 85, 93, 99, 103, 111</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke's World of Science Encyclopedia, Volume 10: Research Projects)</i></p>

Body of Knowledge: The Nature of Science
Big Idea 1: The Practice of Science (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.N.1.5 Recognize that learning can come from careful observation.</p> <p><i>Ciencias 1 (Serie Amigos)</i> TG: pages 25, 30, 38, 40-41, 49, 54-55, 61, 67, 78, 85, 90-91, 127, 134, 136-137 SB: pages 28-29, 46-47, 66-67, 76-77, 98-99, 118-119, 135AB, 136-137, 156-157, 188-189, 204-205, 224-225, 245-246, 254-255, 276-277, 296-297, 304-305, 326-327, 346-347, 358-359 WB: pages 11, 23, 41, 53, 59, 65</p> <p>Rourke Resources: <i>Hierba se escribe con H (G Is For Grass)</i> <i>Insectos (Insects)</i> <i>Colores vivos (Living Colors)</i> <i>Haz que se mueva (Making Things Move)</i> <i>Plantas que alimentan (Plant Foods)</i> <i>¿Qué se puede hacer con el agua? (What Can You Do With Water?)</i></p>		<p>SC.2.N.1.5 Distinguish between empirical observation (what you see, hear, feel, smell, or taste) and ideas or inferences (what you think).</p> <p><i>Ciencias 2 (Serie Amigos)</i> TG: pages 26, 31, 33, 36, 38, 43, 44, 46-47, 55, 57, 62, 64-65, 73, 75, 87, 99, 113-115, 136, 139 SB: pages 26-27, 30-31, 38-39, 41, 46-47, 53, 56-57, 61, 71, 74-77, 98-99, 108-109, 122-123, 130-131, 152-153, 159, 198-199, 230-231, 262-265, 315, 328-329 WB: pages 9, 12, 15, 19, 20, 26, 27, 32-34, 44, 49, 50, 58, 63, 69, 75, 79, 86, 91</p>	<p>SC.3.N.1.5 Recognize that scientists question, discuss, and check each others' evidence and explanations.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG: pages: 27, 32, 33, 35-39, 42-43, 47-51, 53-57, 59-61, 63-65, 67. SB: pages: 32-33, 44-45, 48-49, 51-59, 62, 66-67, 80-87, 90, 92-93, 95-101, 104-105, 107-109, 112-121, 125-130, 132-133, 138 WB: pages: 13-15, 17, 18-22, 24-27, 30, 32, 37-39, 42, 45-46</p>	<p>SC.4.N.1.5 Compare the methods and results of investigations done by other classmates.</p> <p><i>Ciencias 4 (Serie Amigos)</i> SB: pages: 37, 49, 57, 70, 77, 91, 144-145, 175, 247, 291</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke's World of Science Encyclopedia, Volume 10: Research Projects)</i></p>	<p>SC.5.N.1.5 Recognize and explain that authentic scientific investigation frequently does not parallel the steps of "the scientific method."</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke's World of Science Encyclopedia, Volume 10: Research Projects)</i></p>

Body of Knowledge: The Nature of Science
Big Idea 1: The Practice of Science (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
		<p>SC.2.N.1.6 Explain how scientists alone or in groups are always investigating new ways to solve problems.</p> <p>Ciencias 2 (Serie Amigos) TG: 22-45 SB: 26-27, 36-37, 56-57, 68-69, 76-77 WB: 7,14, 17, 23</p>	<p>SC.3.N.1.6 Infer based on observation.</p> <p>Ciencias 3 (Serie Amigos) TG pages: 27, 32, 33, 35-39, 42-43, 47-49, 50-51, 53-57, 59-61, 63-65, 67 SB pages: 32-33, 44-45, 48-49, 51-59, 62, 66-67, 80-87, 90, 92-93, 95-101, 104-105, 107-109, 112-121, 125-130, 132-133, 138 WB pages: 13-15, 17-22, 24-27, 30, 32, 37-39, 42, 45-46</p> <p>Rourke Resources: <i>Midamos nuestro entorno (Measuring Our World)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke’s World of Science Encyclopedia, Volume 10: Research Projects)</i></p>	<p>SC.4.N.1.6 Keep records that describe observations made, carefully distinguishing actual observations from ideas and inferences about the observations.</p> <p>Ciencias 4 (Serie Amigos) TG pages: 26-31 SB pages: 18, 22, 25, 26, 34, 40, 52, 56, 70, 74, 90, 91, 108, 109, 126-127, 139, 142, 154, 161, 165, 175, 178, 179, 194, 195, 208, 209, 212, 225, 246, 261, 264, 274, 277, 280, 284, 295, 299-301</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke’s World of Science Encyclopedia, Volume 10: Research Projects)</i></p>	<p>SC.5.N.1.6 Recognize and explain the difference between personal opinion/interpretation and verified observation.</p> <p>Ciencias 5 (Serie Amigos) TG: 70-75 SB: 159,279 WB: 6</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke’s World of Science Encyclopedia, Volume 10: Research Projects)</i></p>

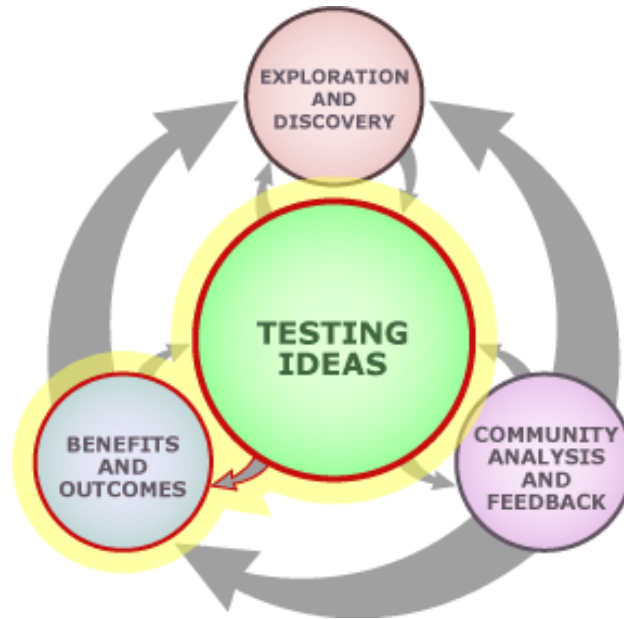
Body of Knowledge: The Nature of Science
Big Idea 1: The Practice of Science (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
			<p>SC.3.N.1.7 Explain that empirical evidence is information, such as observations or measurements, that is used to help validate explanations of natural phenomena.</p> <p>Ciencias 3 (Serie Amigos) TG pages: 27, 32, 33, 37-38, 39, 42-43, 48, 50-51, 55, 57, 61, 67-69, 78, 84, 87, 92, 94, 99, 101, 110, 113, 118, 119, 127, 131, 138-139 SB pages: 32-33, 44-45, 48-49, 56-57, 62-63, 84-85, 92-93, 100-101, 108-109, 120-121, 128-129, 138-141, 162-163, 178-179, 185, 194-195, 201, 208-209, 217, 238-239, 246-247, 256-257, 262-263, 282-283, 292-293, 299, 302-303 WB pages: 11, 17, 23, 29, 35, 41, 47, 53, 59, 65, 71, 77, 83, 89, 95</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke's World of Science Encyclopedia, Volume 10: Research Projects)</i></p>	<p>SC.4.N.1.7 Recognize and explain that scientists base their explanations on evidence.</p> <p>Ciencias 4 (Serie Amigos) TG pages: 26-31 SB pages: 18, 22, 25, 26, 34, 40, 52, 56, 70, 74, 90, 91, 108, 109, 126-127, 139, 142, 154, 161, 165, 175, 178, 179, 194, 195, 208, 209, 212, 225, 246, 261, 264, 274, 277, 280, 284, 295, 299-301</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke's World of Science Encyclopedia, Volume 10: Research Projects)</i></p>	

Body of Knowledge: The Nature of Science
Big Idea 1: The Practice of Science (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
				<p>SC.4.N.1.8 Recognize that science involves creativity in designing experiments.</p> <p>Ciencias 4 (Serie Amigos) TG pages: 26-31 SB pages: 18, 22, 25, 26, 34, 40, 52, 56, 70, 74, 90, 91, 108, 109, 126-127, 139, 142, 154, 161, 165, 175, 178, 179, 194, 195, 208, 209, 212, 225, 246, 261, 264, 274, 277, 280, 284, 295, 299-301</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke's World of Science Encyclopedia, Volume 10: Research Projects)</i></p>	

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.

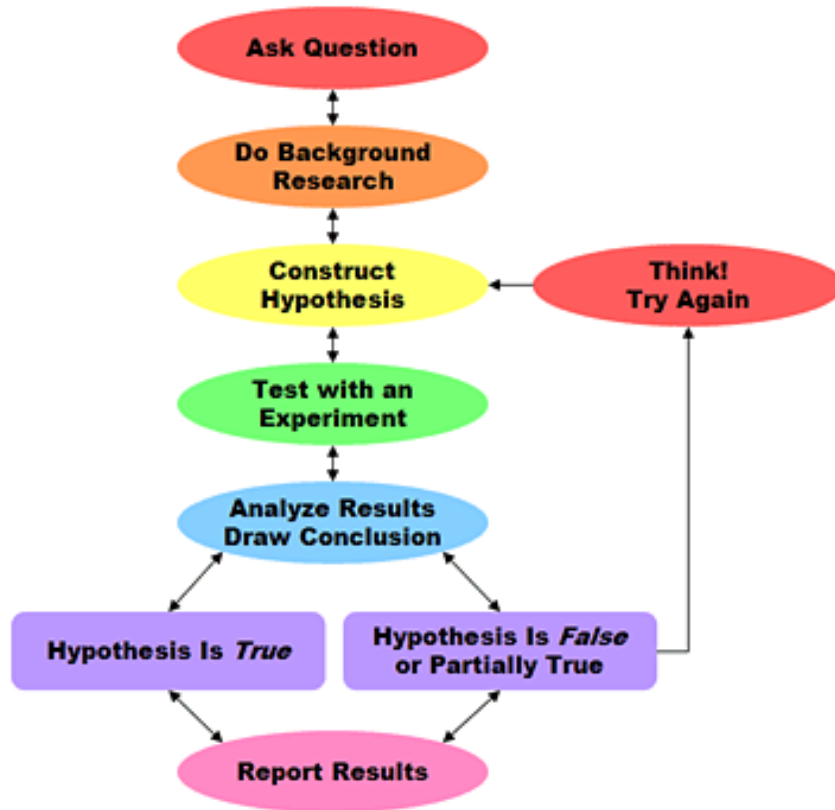
B: Scientific knowledge is durable and robust, but open to change.

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.

Body of Knowledge: The Nature of Science
Big Idea 2: The Characteristics of Scientific Knowledge

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
				<p>SC.4.N.2.1 Explain that science focuses solely on the natural world.</p> <p>Ciencias 4 (Serie Amigos) TG pages: 26-31 SB pages: 18, 22, 25, 26, 34, 40, 52, 56, 70, 74, 90, 91, 108, 109, 126-127, 139, 142, 154, 161, 165, 175, 178, 179, 194, 195, 208, 209, 212, 225, 246, 261, 264, 274, 277, 280, 284, 295, 299-301</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke’s World of Science Encyclopedia, Volume 10: Research Projects)</i></p>	<p>SC.5.N.2.1 Recognize and explain that science is grounded in empirical observations that are testable; explanation must always be linked with evidence.</p> <p>Ciencia 5 (Serie Amigo) TG pages: 40-41 SB: 78-79</p> <p>Rourke Resources: <i>¿Frío o caliente? (What Is Hot? What Is Not?)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke’s World of Science Encyclopedia, Volume 10: Research Projects)</i></p>
					<p>SC.5.N.2.2 Recognize and explain that when scientific investigations are carried out, the evidence produced by those investigations should be replicable by others.</p> <p>Ciencias 5 (Serie Amigos) TG:30,42-45 SB: 42-43,64,-69,83-85, 88-89,102 WB:32,33</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación (Rourke’s World of Science Encyclopedia, Volume 10: Research Projects)</i></p>

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.

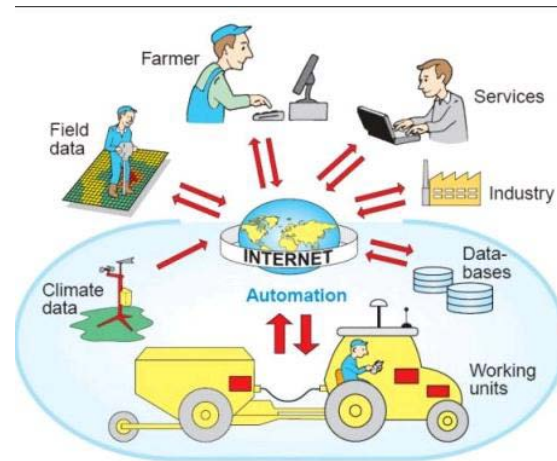
Body of Knowledge: The Nature of Science
Big Idea 3: The Role of Theories, Laws, Hypotheses, and Models

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
			<p>SC.3.N.3.1 Recognize that words in science can have different or more specific meanings than their use in everyday language; for example, energy, cell, heat/cold, and evidence.</p> <p>Ciencias 3 (Serie Amigos) TG pages: 27, 32, 33, 35-39, 42-43, 47-49, 50-51, 53-57, 59-61, 63-65, 67. SB pages: 32-33, 44-45, 48-49, 51-59, 62, 66-67, 80-87, 90, 92-93, 95-101, 104-105, 107-109, 112-121, 125-130, 132-133, 138. WB pages: 13-15, 17, 18-22, 24-27, 30, 32, 37-39, 42, 45-46</p>	<p>SC.4.N.3.1 Explain that models can be three dimensional, two dimensional, an explanation in your mind, or a computer model.</p> <p>Ciencias 4 (Serie Amigos) TG pages: 68-73, 86-89, 234-243 SB pages: 218-219, 223 WB page 84</p>	
			<p>SC.3.N.3.2 Recognize that scientists use models to help understand and explain how things work.</p> <p>Ciencias 3 (Serie Amigos) TG pages: 23, 31, 32, 35, 51, 59, 67, 70-71, 99, 111, 117, 125, 126, 132, 138. SB pages: 21 (desarrolla destrezas), 39 (desarrolla destrezas), 44-45, 53 (desarrolla destrezas), 92, 113 (desarrolla destrezas), 138 (interpreta), 142-143, 208-209, 241 (desarrolla destrezas), 255 (desarrolla destrezas), 272-273, 279 (desarrolla destrezas), 292-293, 302-303. WB pages: 6, 8, 12, 13, 21, 37, 42, 47, 57, 63, 65, 76, 82, 87, 93</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación</i> <i>(Rourke's World of Science Encyclopedia, Volume 10: Research Projects)</i></p>		

Body of Knowledge: The Nature of Science
Big Idea 3: The Role of Theories, Laws, Hypotheses, and Models

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
			<p>SC.3.N.3.3 Recognize that all models are approximations of natural phenomena; as such, they do not perfectly account for all observations.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG pages: 23, 31, 32, 35, 51, 59, 67, 70-71, 99, 111, 117, 125, 126, 132, 138 SB pages: 21 (desarrolla destrezas), 39 (desarrolla destrezas), 44-45, 53 (desarrolla destrezas), 92, 113 (desarrolla destrezas), 138 (interpreta), 142-143, 208-209, 241 (desarrolla destrezas), 255 (desarrolla destrezas), 272-273, 279 (desarrolla destrezas), 292-293, 302-303. WB pages: 6, 8, 12, 13, 21, 37, 42, 47, 57, 63, 65, 76, 82, 87, 93</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 10: Proyectos de investigación</i> <i>(Rourke's World of Science Encyclopedia, Volume 10: Research Projects)</i></p>		

BIG IDEA 4: Science and Society



As tomorrow's citizens, students should be able to identify issues about which society could provide input, formulate scientifically investigable questions about those issues, construct investigations of their questions, collect and evaluate data from their investigations, and develop scientific recommendations based upon their findings.

Grade 8

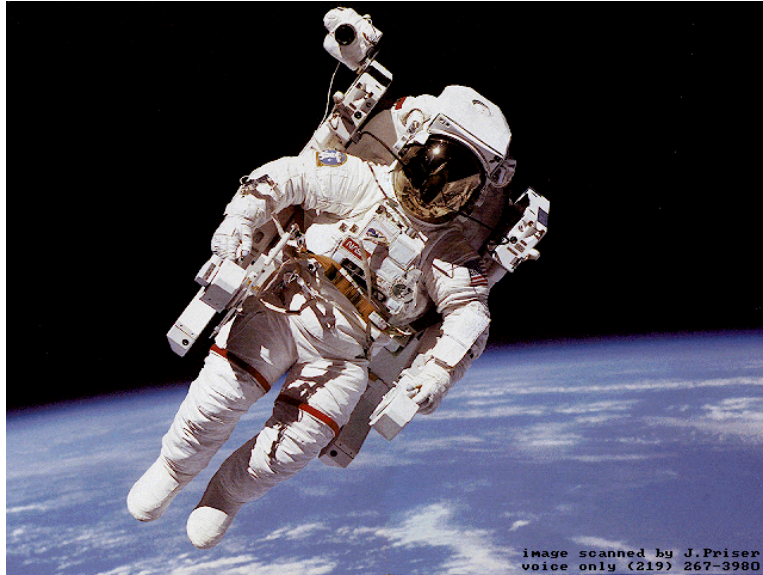
SC.8.N.4.1 Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.

SC.8.N.4.2 Explain how political, social, and economic concerns can affect science, and vice versa.

Body of Knowledge: The Nature of Science
Big Idea 4: Science and Society (8th grade only)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade

BIG IDEA 5: Earth in Space and Time



Humans continue to explore Earth's place in space.

Gravity and energy influence the formation of galaxies, including our own Milky Way Galaxy, stars, the Solar System, and Earth.

Humankind's need to explore continues to lead to the development of knowledge and understanding of our Solar System.

Body of Knowledge: Earth and Space Science
Big Idea 5: Earth in Space and Time

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.E.5.1 Explore the Law of Gravity by investigating how objects are pulled toward the ground unless something holds them up.</p>	<p>SC.1.E.5.1 Observe and discuss that there are more stars in the sky than anyone can easily count and that they are not scattered evenly in the sky.</p>		<p>SC.3.E.5.1 Explain that stars can be different; some are smaller, some are larger, and some appear brighter than others; all except the Sun are so far away that they look like points of light.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG page: 129 SB pages: 286-287 WB pages: 72, 90, 94</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 7: Las astronomía y el espacio (Rourke’s World of Science Encyclopedia, Volume 7: Astronomy & Space)</i></p>	<p>SC.4.E.5.1 Observe that the patterns of stars in the sky stay the same although they appear to shift across the sky nightly, and different stars can be seen in different seasons.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 7: Las astronomía y el espacio (Rourke’s World of Science Encyclopedia, Volume 7: Astronomy & Space)</i></p>	<p>SC.5.E.5.1 Recognize that a galaxy consists of gas, dust, and many stars, including any objects orbiting the stars. Identify our home galaxy as the Milky Way.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 7: Las astronomía y el espacio (Rourke’s World of Science Encyclopedia, Volume 7: Astronomy & Space)</i></p>
<p>SC.K.E.5.2 Recognize the repeating pattern of day and night.</p> <p><i>Ciencias 1 (Serie Amigos)</i> TG: pages 125-129 SB: pages 321, 326-327, 332 WB: pages 87, 89</p>	<p>SC.1.E.5.2 Explore the Law of Gravity by demonstrating that Earth’s gravity pulls any object on or near Earth toward it even though nothing is touching the object.</p>		<p>SC.3.E.5.2 Identify the Sun as a star that emits energy; some of it in the form of light.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG pages: 129, 130 SB pages: 286-289 WB pages 72, 90, 94</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 7: Las astronomía y el espacio (Rourke’s World of Science Encyclopedia, Volume 7: Astronomy & Space)</i></p>	<p>SC.4.E.5.2 Describe the changes in the observable shape of the moon over the course of about a month.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 7: Las astronomía y el espacio (Rourke’s World of Science Encyclopedia, Volume 7: Astronomy & Space)</i></p>	<p>SC.5.E.5.2 Recognize the major common characteristics of all planets and compare/contrast the properties of inner and outer planets.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 7: Las astronomía y el espacio (Rourke’s World of Science Encyclopedia, Volume 7: Astronomy & Space)</i></p>

Body of Knowledge: Earth and Space Science
Big Idea 5: Earth in Space and Time (Continuation)

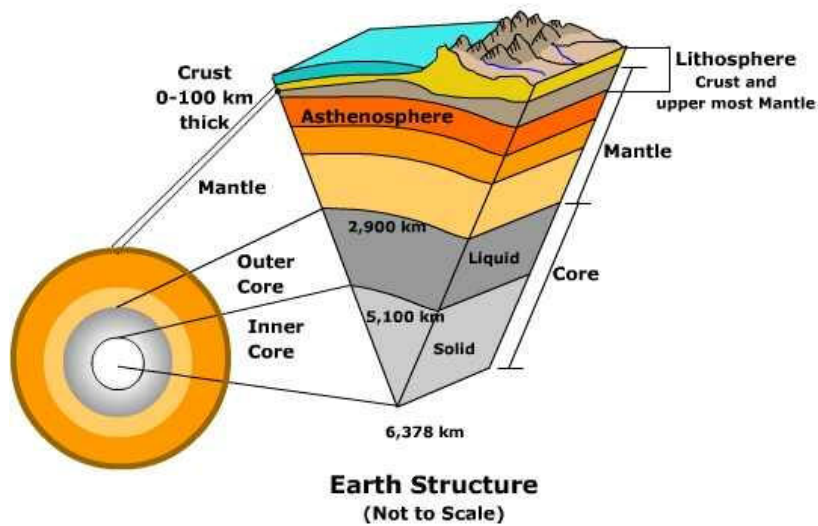
Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.E.5.3 Recognize that the Sun can only be seen in the daytime.</p> <p><i>Ciencias 1 (Serie Amigos)</i> TG: pages 125-129 SB: pages 321, 326-327, 332. WB: pages 87, 89</p>	<p>SC.1.E.5.3 Investigate how magnifiers make things appear bigger and help people see things they could not see without them.</p>		<p>SC.3.E.5.3 Recognize that the Sun appears large and bright because it is the closest star to Earth.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG pages: 129, 130 SB pages: 286-289. WB pages 72, 90, 94</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 7: Las astronomía y el espacio</i> <i>(Rourke's World of Science Encyclopedia, Volume 7: Astronomy & Space)</i></p>	<p>SC.4.E.5.3 Recognize that Earth revolves around the Sun in a year and rotates on its axis in a 24-hour day.</p> <p>Rourke Resources: <i>La primavera de día y de noche</i> <i>(One Spring Day And Night)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 7: Las astronomía y el espacio</i> <i>(Rourke's World of Science Encyclopedia, Volume 7: Astronomy & Space)</i></p>	<p>SC.5.E.5.3 Distinguish among the following objects of the Solar System -- Sun, planets, moons, asteroids, comets -- and identify Earth's position in it.</p> <p><i>Ciencias 5(Serie Amigos)</i> TG pages: SB pages: WB pages</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 7: Las astronomía y el espacio</i> <i>(Rourke's World of Science Encyclopedia, Volume 7: Astronomy & Space)</i></p>

Body of Knowledge: Earth and Space Science
Big Idea 5: Earth in Space and Time (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.E.5.4 Observe that sometimes the Moon can be seen at night and sometimes during the day.</p>	<p>SC.1.E.5.4 Identify the beneficial and harmful properties of the Sun.</p> <p><i>Ciencias 1 (Serie Amigos)</i> TG: pages 56-57. SB: pages 124, 127 WB: pages 31C</p> <p>Rourke Resources: <i>Temporada de calabazas (Pumpkin Time)</i></p>		<p>SC.3.E.5.4 Explore the Law of Gravity by demonstrating that gravity is a force that can be overcome.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG pages: 86, 87. SB pages: 180-181, 182, 184 WB pages: 55, 56, 58</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke's World of Science Encyclopedia, Volume 6: Physics)</i></p>	<p>SC.4.E.5.4 Relate that the rotation of Earth (day and night) and apparent movements of the Sun, Moon, and stars are connected.</p>	
<p>SC.K.E.5.5 Observe that things can be big and things can be small as seen from Earth.</p>			<p>SC.3.E.5.5 Investigate that the number of stars that can be seen through telescopes is dramatically greater than those seen by the unaided eye.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 7: Las astronomía y el espacio (Rourke's World of Science Encyclopedia, Volume 7: Astronomy & Space)</i></p>	<p>SC.4.E.5.5 Investigate and report the effects of space research and exploration on the economy and culture of Florida.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 7: Las astronomía y el espacio (Rourke's World of Science Encyclopedia, Volume 7: Astronomy & Space)</i></p>	
<p>C.K.E.5.6 Observe that some objects are far away and some are nearby as seen from Earth.</p>					

BIG IDEA 6: Earth Structures

Humans continue to explore the composition and structure of the surface of the Earth.



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 water and natural resources.

Body of Knowledge: Earth and Space Science
Big Idea 6: Earth Structures

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
	<p>SC.1.E.6.1 Recognize that water, rocks, soil, and living organisms are found on Earth's surface.</p> <p><i>Ciencias 1 (Serie Amigos)</i> TG: pages 106-109, 111 SB: pages 270-271, 273-275, 280-281</p> <p>Rourke Resources: <i>Observemos las rocas (Let's Look At Rocks)</i> <i>Tierra (Dirt)</i> <i>Una visita al estanque (At The Pond)</i> <i>El día de la Tierra (Earth Day)</i></p>	<p>SC.2.E.6.1 Recognize that Earth is made up of rocks. Rocks come in many sizes and shapes.</p> <p><i>Ciencias 2 (Serie Amigos)</i> TG: pages 101-102, 104, 110 SB: pages 234-237, 244, 254-255 WB: pages 68, 69, 73</p> <p>Rourke Resources: <i>Observemos las rocas (Let's Look At Rocks)</i></p>	<p>SC.3.E.6.1 Demonstrate that radiant energy from the Sun can heat objects and when the Sun is not present, heat may be lost.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG pages: 111-112, 113, 129, 130, 134 SB pages: 240-241, 244, 246-247, 286-287, 289, 299 WB pages: 73, 75, 77</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 7: Las astronomía y el espacio (Rourke's World of Science Encyclopedia, Volume 7: Astronomy & Space)</i></p>	<p>SC.4.E.6.1 Identify the three categories of rocks: igneous, (formed from molten rock); sedimentary (pieces of other rocks and fossilized organisms); and metamorphic (formed from heat and pressure).</p> <p><i>Ciencias 4 (Serie Amigos)</i> TG pages: 26-31 SB pages: 28-36, 40-41 WB pages: 12, 13</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 4: La Tierra (Rourke's World of Science Encyclopedia, Volume 4: Earth Science)</i></p>	

Body of Knowledge: Earth and Space Science
Big Idea 6: Earth Structures (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
	<p>SC.1.E.6.2 Describe the need for water and how to be safe around water.</p> <p><i>Ciencias 1 (Serie Amigos)</i> TG pages: 29-30, 33, 36-37, 40-41, 78, 84, 132-134 SB pages: 40-41, 46-47, 54, 62-63, 76-77, 186, 202, 342-343 WB pages: 13, 51, 92</p> <p>Rourke Resources: <i>Una visita al estanque (At the Pond)</i> <i>¿Qué se puede hacer con el agua? (What Can You Do With Water?)</i></p>	<p>SC.2.E.6.2 Describe how small pieces of rock and dead plant and animal parts can be the basis of soil and explain the process by which soil is formed.</p> <p><i>Ciencias 2 (Serie Amigos)</i> TG: pages 101-103, 105, 113 SB: pages 234-235, 236-239, 244, 245, 246-247, 260-261 WB: pages: 66-67, 68-69, 71</p> <p>Rourke Resources: <i>Tierra (Dirt)</i></p>		<p>SC.4.E.6.2 Identify the physical properties of common earth-forming minerals, including hardness, color, luster, cleavage, and streak color, and recognize the role of minerals in the formation of rocks.</p> <p><i>Ciencias 4 (Serie Amigos)</i> TG pages: 36-39 SB pages: 28-36, 40-41 WB pages: 12, 13</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 4: La Tierra (Rourke's World of Science Encyclopedia, Volume 4: Earth Science)</i></p>	

Body of Knowledge: Earth and Space Science
Big Idea 6: Earth Structures (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
	<p>SC.1.E.6.3 Recognize that some things in the world around us happen fast and some happen slowly.</p> <p>Rourke Resources: <i>Observemos las rocas (Let's Look At Rocks)</i> <i>Temporada de calabazas (Pumpkin Time)</i></p>	<p>SC.2.E.6.3 Classify soil types based on color, texture (size of particles), the ability to retain water, and the ability to support the growth of plants.</p> <p>Ciencias 2 (Serie Amigos) TG: pages 102, 104, 105 SB: pages 236-237, 242-243, 246-247 WB: pages 67, 68, 71</p> <p>Rourke Resources: <i>Tierra (Dirt)</i></p>		<p>SC.4.E.6.3 Recognize that humans need resources found on Earth and that these are either renewable or nonrenewable.</p> <p>Ciencias 4 (Serie Amigos) TG pages: 26-31 SB pages: 28-43 WB page: 12-17</p> <p>Rourke Resources: <i>Qué pasa cuando llueve (When It Rains)</i></p>	
				<p>SC.4.E.6.4 Describe the basic differences between physical weathering (breaking down of rock by wind, water, ice, temperature change, and plants) and erosion (movement of rock by gravity, wind, water, and ice).</p> <p>Ciencias 4 (Serie Amigos) TG pages: 42-45 SB pages: 28-36, 40-41 WB pages: 32, 33</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 4: La Tierra (Rourke's World of Science Encyclopedia, Volume 4: Earth Science)</i></p>	

Big Idea 6: Earth Structures (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
				<p>SC.4.E.6.5 Investigate how technology and tools help to extend the ability of humans to observe very small things and very large things.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 4: La Tierra (Rourke's World of Science Encyclopedia, Volume 4: Earth Science)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 9: La tecnología (Rourke's World of Science Encyclopedia, Volume 9: Technology)</i></p>	
				<p>SC.4.E.6.6 Identify resources available in Florida (water, phosphate, oil, limestone, silicon, wind, and solar energy).</p>	

BIG IDEA 7: Earth Systems and Patterns



Humans continue to explore the interactions among water, air, and land.

Air and water are in constant motion that results in changing conditions that can be observed over time.

Body of Knowledge: Earth and Space Science
Big Idea 7: Earth Systems and Patterns

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
		<p>SC.2.E.7.1 Compare and describe changing patterns in nature that repeat themselves, such as weather conditions including temperature and precipitation, day to day and season to season.</p> <p>Rourke Resources: <i>La primavera de día y de noche</i> <i>(One Spring Day and Night)</i> <i>Qué pasa cuando llueve</i> <i>(When It Rains)</i></p>			<p>SC.5.E.7.1 Create a model to explain the parts of the water cycle. Water can be a gas, a liquid, or a solid and can go back and forth from one state to another.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 5: La química</i> <i>(Rourke’s World of Science Encyclopedia, Volume 5: Chemistry)</i></p>
		<p>SC.2.E.7.2 Investigate by observing and measuring, that the Sun’s energy directly and indirectly warms the water, land, and air.</p>			<p>SC.5.E.7.2 Recognize that the ocean is an integral part of the water cycle and is connected to all of Earth’s water reservoirs via evaporation and precipitation processes.</p> <p>Rourke Resources: <i>De regreso al mar (Back To The Sea)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 4: La Tierra</i> <i>(Rourke’s World of Science Encyclopedia, Volume 4: Earth Science)</i></p>

Body of Knowledge: Earth and Space Science
Big Idea 7: Earth Systems and Patterns (Continuation)

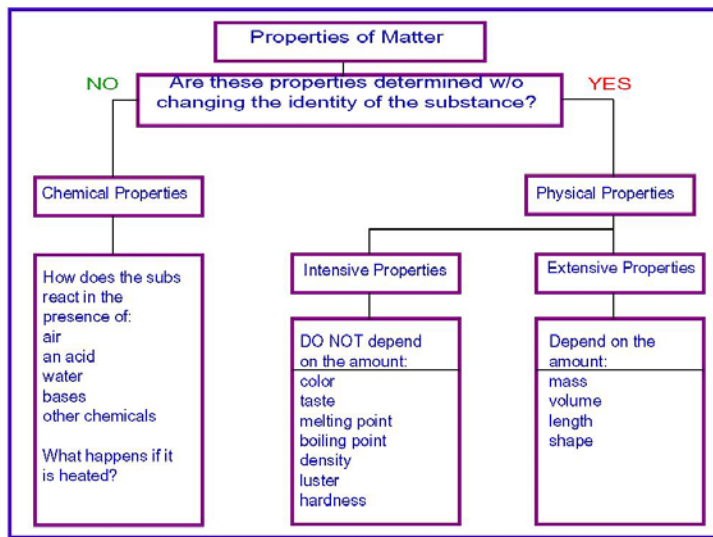
Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
		<p>SC.2.E.7.3 Investigate, observe and describe how water left in an open container disappears (evaporates), but water in a closed container does not disappear (evaporate).</p> <p>Ciencias 2 (Serie Amigos) TG: pages 31, 33, 36, 37, 38 SB: pages 38-39, 47, 51, 53, 54-55, 60-61 WB: pages 19, 20, 23</p>			<p>SC.5.E.7.3 Recognize how air temperature, barometric pressure, humidity, wind speed and direction, and precipitation determine the weather in a particular place and time.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 4: La Tierra (Rourke's World of Science Encyclopedia, Volume 4: Earth Science)</i></p>
		<p>SC.2.E.7.4 Investigate that air is all around us and that moving air is wind.</p> <p>Ciencias 2 (Serie Amigos) TG: pages 95, 98-99 SB: pages 215, 224-229, 230-231 WB: page 62</p> <p>Rourke Resources: <i>El aire que nos rodea (Air Around Us)</i></p>			<p>SC.5.E.7.4 Distinguish among the various forms of precipitation (rain, snow, sleet, and hail), making connections to the weather in a particular place and time.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 4: La Tierra (Rourke's World of Science Encyclopedia, Volume 4: Earth Science)</i></p>

Body of Knowledge: Earth and Space Science
Big Idea 7: Earth Systems and Patterns (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
		<p>SC.2.E.7.5 State the importance of preparing for severe weather, lightning, and other weather related events.</p>			<p>SC.5.E.7.5 Recognize that some of the weather-related differences, such as temperature and humidity, are found among different environments, such as swamps, deserts, and mountains.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 4: La Tierra (Rourke’s World of Science Encyclopedia, Volume 4: Earth Science)</i></p>
					<p>SC.5.E.7.6 Describe characteristics (temperature and precipitation) of different climate zones as they relate to latitude, elevation, and proximity to bodies of water.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 4: La Tierra (Rourke’s World of Science Encyclopedia, Volume 4: Earth Science)</i></p>
					<p>SC.5.E.7.7 Design a family preparedness plan for natural disasters and identify the reasons for having such a plan.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 4: La Tierra (Rourke’s World of Science Encyclopedia, Volume 4: Earth Science)</i></p>

BIG IDEA 8: Properties of Matter

A. All objects and substances in the world are made of matter. Matter has two fundamental properties: matter takes up space and matter has mass.



B. Objects and substances can be classified by their physical and chemical properties. Mass is the amount of matter (or "stuff") in an object. Weight, on the other hand, is the measure of force of attraction (gravitational force) between an object and Earth.

The concepts of mass and weight are complicated and potentially confusing to elementary students. Hence, the more familiar term of "weight" is recommended for use to stand for both mass and weight in grades K-5. By grades 6-8, students are expected to understand the distinction

between mass and weight, and use them appropriately

Body of Knowledge: Physical Science

Big Idea 8: Properties of Matter

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.P.8.1 Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light) and texture.</p> <p><i>Ciencias 1 (Serie Amigos)</i> TG: pages 112-117 SB: pages 290-299, 302-303 WB: pages 78, 79, 80-83</p> <p>Rourke resources: <i>Colores vivos (Living Colors)</i> <i>¿Cuánto mide el gusano medidor?</i> <i>(Is an Inchworm an Inch?) eBook</i> <i>Figuras y patrones que conocemos</i> <i>(Shapes and Patterns We Know) eBook</i> <i>De lado a lado</i> <i>(Taking Sides) eBook</i></p>	<p>SC.1.P.8.1 Sort objects by observable properties, such as size, shape, color, temperature (hot or cold), weight (heavy or light), texture, and whether objects sink or float.</p> <p><i>Ciencias 1 (Serie Amigos)</i> TG: pages 112-117 SB: pages 290-299, 302-303 WB: pages 78, 79, 80-83.</p> <p>Rourke Resources: <i>Características de la naturaleza</i> <i>(Our Attribute Walk)</i> <i>Cosas pegajosas</i> <i>(Sticky Stuff)</i> <i>¿Cuánto mide el gusano medidor?</i> <i>(Is an Inchworm an Inch?) eBook</i> <i>Figuras y patrones que conocemos</i> <i>(Shapes and Patterns We Know)</i></p>	<p>SC.2.P.8.1 Observe and measure objects in terms of their properties, including size, shape, color, temperature, weight, texture, sinking or floating in water, and attraction and repulsion of magnets.</p> <p><i>Ciencias 2 (Serie Amigos)</i> TG: pages 22-26 SB: pages 20-31 WB: pages 6, 7, 9, 10, 20</p> <p>Rourke Resources: <i>Características de la naturaleza</i> <i>(Our Attribute Walk)</i> <i>¿Cuánto mide el gusano medidor?</i> <i>(Is an Inchworm an Inch?) eBook</i> <i>Figuras y patrones que conocemos</i> <i>(Shapes and Patterns We Know)</i></p>	<p>SC.3.P.8.1 Measure and compare temperatures of various samples of solids and liquids.</p> <p>Rourke Resources: <i>Midamos nuestro entorno</i> <i>(Measuring Our World)</i></p>	<p>SC.4.P.8.1 Measure and compare objects and materials based on their physical properties including: mass, shape, volume, color, hardness, texture, odor, taste, attraction to magnets.</p> <p><i>Ciencias 4 (Serie Amigos)</i> TG pages: 42-45 SB pages: 78-91 WB page: 33</p> <p>Rourke Resources: <i>Hecho de metal</i> <i>(Made Of Metal)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 5: La química</i> <i>(Rourke’s World of Science Encyclopedia, Volume 5: Chemistry)</i></p>	<p>SC.5.P.8.1 Compare and contrast the basic properties of solids, liquids, and gases, such as mass, volume, color, texture, and temperature.</p> <p>Rourke Resources: <i>Hecho de metal</i> <i>(Made Of Metal)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 5: La química</i> <i>(Rourke’s World of Science Encyclopedia, Volume 5: Chemistry)</i></p>

Body of Knowledge: Physical Science
Big Idea 8: Properties of Matter (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
		<p>SC.2.P.8.2 Identify objects and materials as solid, liquid, or gas.</p> <p><i>Ciencias 2 (Serie Amigos)</i> TG: pages 22-26, 30-31, 33 SB: pages 20-31, 34-43, 46-47 WB: pages 12, 13, 15, 17</p>	<p>SC.3.P.8.2 Measure and compare the mass and volume of solids and liquids.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG: pages 52 SB: pages 100-101 WB: pages 30</p> <p>Rourke Resources: <i>Midamos nuestro entorno (Measuring Our World)</i></p>	<p>SC.4.P.8.2 Identify properties and common uses of water in each of its states.</p> <p><i>Ciencias 4 (Serie Amigos)</i> TG pages: 52-55 SB pages: 114-127 WB pages: 42, 43</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 5: La química (Rourke's World of Science Encyclopedia, Volume 5: Chemistry)</i></p>	<p>SC.5.P.8.2 Investigate and identify materials that will dissolve in water and those that will not and identify the conditions that will speed up or slow down the dissolving process.</p> <p><i>Ciencias 5(Serie Amigos)</i> TG pages: 36-41 SB pages: 72-77 WB pages: 24-31</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 5: La química (Rourke's World of Science Encyclopedia, Volume 5: Chemistry)</i></p>

Body of Knowledge: Physical Science
Big Idea 8: Properties of Matter (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
		<p>SC.2.P.8.3 Recognize that solids have a definite shape and that liquids and gases take the shape of their container.</p> <p><i>Ciencias 2 (Serie Amigos)</i> TG: pages 22-23, 26, 30-33 SB: pages 20-21, 30-31, 34-35, 40-42, 46-47 WB: pages 15, 20</p>	<p>SC.3.P.8.3 Compare materials and objects according to properties such as size, shape, color, texture, and hardness.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG pages: SB pages: WB pages:</p> <p>Rourke Resources: <i>Figuras y patrones que conocemos (Shapes and Patterns We Know)</i></p>	<p>SC.4.P.8.3 Explore the Law of Conservation of Mass by demonstrating that the mass of a whole object is always the same as the sum of the masses of its parts.</p> <p><i>Ciencias 4 (Serie Amigos)</i> TG pages: SB pages: WB pages:</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 5: La química (Rourke's World of Science Encyclopedia, Volume 5: Chemistry)</i></p>	<p>SC.5.P.8.3 Demonstrate and explain that mixtures of solids can be separated based on observable properties of their parts such as particle size, shape, color, and magnetic attraction.</p> <p><i>Ciencias 5 (Serie Amigos)</i> TG pages: 48-51 SB pages: 102, 105, 108 WB pages: 38, 39, 43</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 5: La química (Rourke's World of Science Encyclopedia, Volume 5: Chemistry)</i></p>

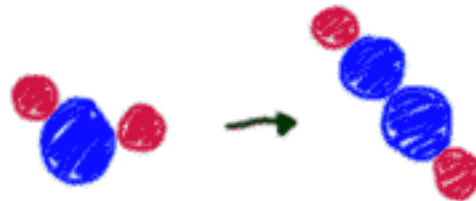
Body of Knowledge: Physical Science
Big Idea 8: Properties of Matter (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
		<p>SC.2.P.8.4 Observe and describe water in its solid, liquid, and gaseous states.</p> <p><i>Ciencias 2 (Serie Amigos)</i> TG: pages 35-36, 38 SB: pages 50-52, 60-61 WB: pages 17, 18, 22</p>		<p>SC.4.P.8.4 Investigate and describe that magnets can attract magnetic materials and attract and repel other magnets.</p> <p>Rourke Resources: <i>Hecho de metal (Made Of Metal)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke's World of Science Encyclopedia, Volume 6: Physics)</i></p>	<p>SC.5.P.8.4 Explore the scientific theory of atoms (also called atomic theory) by recognizing that all matter is composed of parts that are too small to be seen without magnification.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 5: La química (Rourke's World of Science Encyclopedia, Volume 5: Chemistry)</i></p>
		<p>SC.2.P.8.5 Measure and compare temperatures taken every day at the same time.</p>			
		<p>SC.2.P.8.6 Measure and compare the volume of liquids using containers of various shapes and sizes.</p> <p><i>Ciencias 2 (Serie Amigos)</i> TG: pages 22-23, 26, 30, 31-33 SB: pages 20-21, 30-31, 34-35, 40-42, 46-47 WB: pages 15, 20</p>			

BIG IDEA 9: Changes in Matter



PHYSICAL CHANGE OF
WATER INTO ICE



CHEMICAL CHANGE OF
WATER INTO
HYDROGEN PEROXIDE

A. Matter can undergo a variety of changes.

B. Matter can be changed physically or chemically.

Body of Knowledge: Physical Science
Big Idea 9: Changes in Matter

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.P.9.1 Recognize that the shape of materials such as paper and clay can be changed by cutting, tearing, crumpling, smashing, or rolling.</p> <p><i>Ciencias 1 (Serie Amigos)</i> TG: pages 110, 111, 117. SB: pages 278-279, 285, 287, 300, 301. WB: pages 82, 83.</p> <p>Rourke Resources: <i>De lado a lado</i> <i>(Taking Sides) eBook</i></p>		<p>SC.2.P.9.1 Investigate that materials can be altered to change some of their properties, but not all materials respond the same way to any one alteration.</p> <p><i>Ciencias 2 (Serie Amigos)</i> TG: pages 24-26, 30-33, 38 SB: pages 24-31, 36-37, 43, 46-47, 56-57 WB: pages 11, 15, 18, 20</p>	<p>SC.3.P.9.1 Describe the changes water undergoes when it changes state through heating and cooling by using familiar scientific terms such as melting, freezing, boiling, evaporation, and condensation.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG pages: 53-55, 56, 57 SB pages: 95-99, 100-101, 102-103, 106, 108 WB pages: 30-31, 33</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 5: La química (Rourke’s World of Science Encyclopedia, Volume 5: Chemistry)</i></p>	<p>SC.4.P.9.1 Identify some familiar changes in materials that result in other materials with different characteristics, such as decaying animal or plant matter, burning, rusting, and cooking.</p> <p><i>Ciencias 4 (Serie Amigos)</i> TG pages: 62-67 SB pages: 155-156, 160-161, 170-174, 181, 206-207 WB pages: 56, 57</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 5: La química (Rourke’s World of Science Encyclopedia, Volume 5: Chemistry)</i></p>	<p>SC.5.P.9.1 Investigate and describe that many physical and chemical changes are affected by temperature.</p> <p><i>Ciencias 5 (Serie Amigos)</i> TG pages: 48-51 SB pages: 103, 104, 108, 109 WB pages: 38, 39, 42, 43</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 5: La química (Rourke’s World of Science Encyclopedia, Volume 5: Chemistry)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>



BIG IDEA 10: Forms of Energy

A. Energy is involved in all physical processes and is a unifying concept in many areas of science.

B. Energy exists in many forms and has the ability to do work or cause a change.

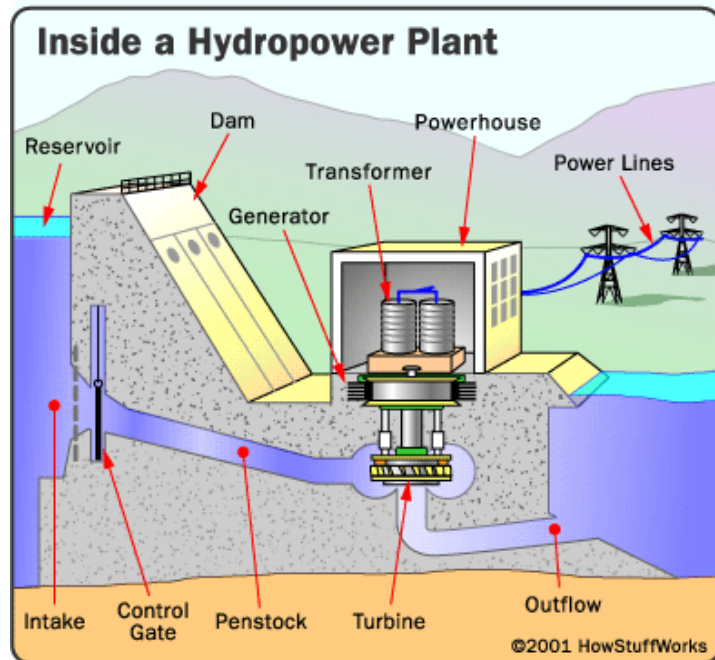
Body of Knowledge: Physical Science
Big Idea 10: Forms of Energy

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.P.10.1 Observe that things that make sound vibrate.</p> <p><i>Ciencias 1 (Serie Amigos)</i> TG: pages 59-61, 62 SB: pages 130, 135, 140-141 WB: pages 38, 39</p>		<p>SC.2.P.10.1 Discuss that people use electricity or other forms of energy to cook their food, cool or warm their homes, and power their cars.</p> <p><i>Ciencias 2 (Serie Amigos)</i> TG pages 41, 56, 66-67, 75 SB: pages 64-65, 105, 132-133, 159 WB: pages 26, 35</p> <p>Rourke Resources: <i>Fuego (Fire)</i></p>	<p>SC.3.P.10.1 Identify some basic forms of energy such as light, heat, sound, electrical, and mechanical.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG pages: 93, 94, 102 SB pages: 196, 197, 200-201, 218-219</p> <p>Rourke Resources: <i>Escuchen esto (Listen To This)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>	<p>SC.4.P.10.1 Observe and describe some basic forms of energy, including light, heat, sound, electrical, and the energy of motion.</p> <p><i>Ciencias 4(Serie Amigos)</i> TG pages: 42-61 SB pages: 81, 83, 96-145 WB pages: 47</p> <p>Rourke Resources: <i>Fuego (Fire)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>	<p>SC.5.P.10.1 Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical.</p> <p>Rourke Resources: <i>Fricción (Friction)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>
			<p>SC.3.P.10.2 Recognize that energy has the ability to cause motion or create change.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG pages: 93, 94, 102 SB pages: 196-197, 200-201, 218-219</p> <p>Rourke Resources: <i>Escuchen esto (Listen To This)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>	<p>SC.4.P.10.2 Investigate and describe that energy has the ability to cause motion or create change.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>	<p>SC.5.P.10.2 Investigate and explain that energy has the ability to cause motion or create change.</p> <p><i>Ciencias 5(Serie Amigos)</i> TG pages: 70-73, 98-99, 108-109, 110-111 SB pages: 164-181, 258-259, 282-283, 284-299</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>

Body of Knowledge: Physical Science
Big Idea 10: Forms of Energy (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
			<p>SC.3.P.10.3 Demonstrate that light travels in a straight line until it strikes an object or travels from one medium to another.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG pages: 93, 94, 102 SB pages: 196-197, 200-201, 218-219</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>	<p>SC.4.P.10.3 Investigate and explain that sound is produced by vibrating objects and that pitch depends on how fast or slow the object vibrates.</p> <p>Rourke Resources: <i>Escuchen esto (Listen To This)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>	<p>SC.5.P.10.3 Investigate and explain that an electrically-charged object can attract an uncharged object and can either attract or repel another charged object without any contact between the objects.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>
			<p>SC.3.P.10.4 Demonstrate that light can be reflected, refracted, and absorbed.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG pages: 93, 94, 102 SB pages: 196-197, 200-201, 218-219</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>	<p>SC.4.P.10.4 Describe how moving water and air are sources of energy and can be used to move things.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>	<p>SC.5.P.10.4 Investigate and explain that electrical energy can be transformed into heat, light, and sound energy, as well as the energy of motion.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>

BIG IDEA 11: Energy Transfer and Transformations



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

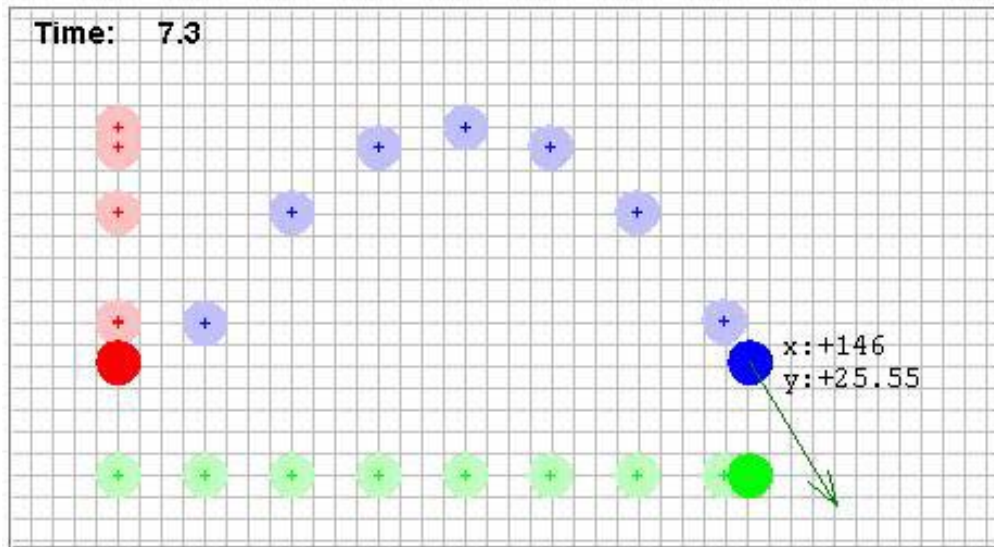
B. Water and sound waves transfer energy through a material.

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

Body of Knowledge: Physical Science
Big Idea 11: Energy Transfer and Transformation

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
			<p>SC.3.P.11.1 Investigate, observe, and explain that things that give off light often also give off heat.</p> <p><i>Ciencias 3Serie Amigos)</i> TG pages: 128-129 SB pages: 286-287</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>	<p>SC.4.P.11.1 Recognize that heat flows from a hot object to a cold object and that heat flow may cause materials to change temperature.</p> <p><i>Ciencias 4 (Serie Amigos)</i> TG pages: 62-65 SB pages: 80-82 WB page: 26</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>	<p>SC.5.P.11.1 Investigate and illustrate the fact that the flow of electricity requires a closed circuit (a complete loop).</p> <p><i>Ciencias 5 (serie Amigos)</i> TG pages: 110-113 SB pages: 296</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>
			<p>SC.3.P.11.2 Investigate, observe, and explain that heat is produced when one object rubs against another, such as rubbing one’s hands together.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>	<p>SC.4.P.11.2 Identify common materials that conduct heat well or poorly.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>	<p>SC.5.P.11.2 Identify and classify materials that conduct electricity and materials that do not.</p> <p>Rourke Resources: <i>Hecho de metal (Made Of Metal)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>

BIG IDEA 12: Motion of Objects



Ball thrown at an angle from the ground

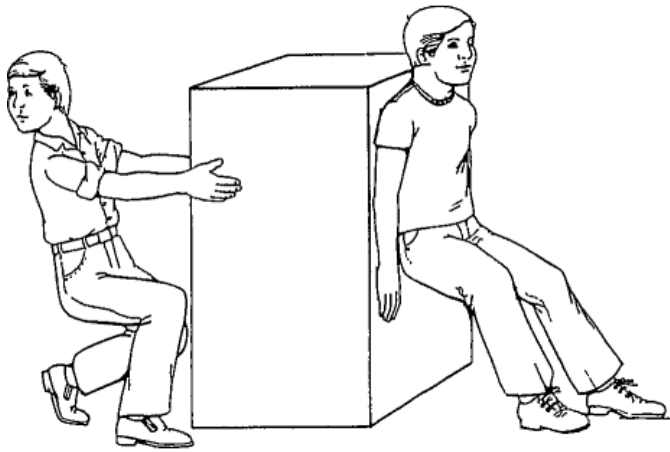
A. Motion is a key characteristic of all matter that can be observed, described, and measured.

B. The motion of objects can be changed by forces.

Body of Knowledge: Physical Science
Big Idea 12: Motions of Objects

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.P.12.1 Investigate that things move in different ways, such as fast, slow, etc.</p>	<p>SC.1.P.12.1 Demonstrate and describe the various ways that objects can move, such as in a straight line, zigzag, back-and-forth, round- and-round, fast, and slow.</p> <p>Rourke Resources: <i>En cualquier dirección (In All Directions)</i></p>			<p>SC.4.P.12.1 Recognize that an object in motion always changes its position and may change its direction.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>	
				<p>SC.4.P.12.2 Investigate and describe that the speed of an object is determined by the distance it travels in a unit of time and that objects can move at different speeds.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke’s World of Science Encyclopedia, Volume 6: Physics)</i></p>	

BIG IDEA 13: Forces and Changes in Motion



A. It takes energy to change the motion of objects.

B. Energy change is understood in terms of forces--pushes or pulls.

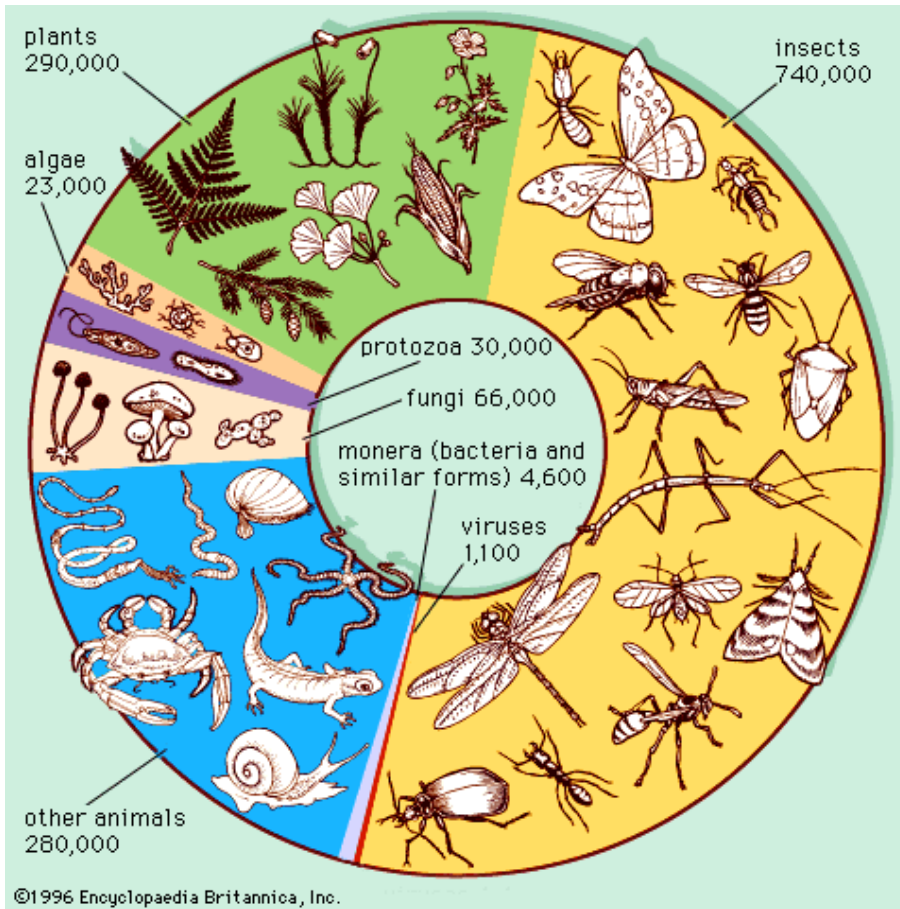
C. Some forces act through physical contact, while others act at a distance.

Body of Knowledge: Physical Science
Big Idea 13: Forces and Changes in Motion

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.P.13.1 Observe that a push or a pull can change the way an object is moving.</p>	<p>SC.1.P.13.1 Demonstrate that the way to change the motion of an object is by applying a push or a pull.</p>	<p>SC.2.P.13.1 Investigate the effect of applying various pushes and pulls on different objects.</p> <p>Rourke Resources: <i>En cualquier dirección</i> <i>(In All Directions)</i></p>			<p>SC.5.P.13.1 Identify familiar forces that cause objects to move, such as pushes or pulls, including gravity acting on falling objects.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física</i> <i>(Rourke's World of Science Encyclopedia, Volume 6: Physics)</i></p>
		<p>SC.2.P.13.2 Demonstrate that magnets can be used to make some things move without touching them.</p>			<p>SC.5.P.13.2 Investigate and describe that the greater the force applied to it, the greater the change in motion of a given object.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física</i> <i>(Rourke's World of Science Encyclopedia, Volume 6: Physics)</i></p>

Body of Knowledge: Physical Science
Big Idea 13: Forces and Changes in Motion (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
		<p>SC.2.P.13.3 Recognize that objects are pulled toward the ground unless something holds them up.</p>			<p>SC.5.P.13.3 Investigate and describe that the more mass an object has, the less effect a given force will have on the object's motion.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke's World of Science Encyclopedia, Volume 6: Physics)</i></p>
		<p>SC.2.P.13.4 Demonstrate that the greater the force (push or pull) applied to an object, the greater the change in motion of the object.</p>			<p>SC.5.P.13.4 Investigate and explain that when a force is applied to an object but it does not move, it is because another opposing force is being applied by something in the environment so that the forces are balanced.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 6: La física (Rourke's World of Science Encyclopedia, Volume 6: Physics)</i></p>



BIG IDEA 14: Organization and Development of Living Organisms

A. All plants and animals, including humans, are alike in some ways and different in others.

B. All plants and animals, including humans, have internal parts and external structures that function to keep them alive and help them grow and reproduce.

C. Humans can better understand the natural world through careful observation.

Body of Knowledge: Life Science
Big Idea 14: Organization and Development of Living Organisms

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.L.14.1 Recognize the five senses and related body parts.</p> <p>Ciencias 1 (Serie Amigos) TG: pages 45, 46-51, 53, 56, 59, 63, 65, 67, 69 SB: pages 89C, 92, 94-95, 100-101, 108, 112-113, 123, 125, 126, 131, 133, 146, 150, 153, 158-159, 167 WB: pages 30, 36, 38, 44, 46</p> <p>Rourke Resources: <i>Los cinco sentidos (Five Senses)</i> <i>Los brazos son para abrazar (Arms Are for Hugging)</i></p>	<p>SC.1.L.14.1 Make observations of living things and their environment using the five senses.</p> <p>Ciencias 1 (Serie Amigos) TG: pages 50-51, 63, 69, 77-78, 86, 90, 91, 92, 100-101 SB: pages 107, 108, 145, 146, 164, 184-185, 188-189, 206-207, 221, 227-228, 229, 254-255 WB: pages 45, 47, 48, 50, 53, 60-61, 63, 65</p> <p>Rourke Resources: <i>Una visita al estanque (At The Pond)</i> <i>Características de la naturaleza (Our Attribute Walk)</i> <i>Temporada de calabazas (Pumpkin Time)</i> <i>¿Dónde quieres vivir? (Habitat Homes)</i> <i>Aullar, rugir, mugir y ladrar (Howl, Growl, Moo, Whoop) eBook</i></p>	<p>SC.2.L.14.1 Distinguish human body parts (brain, heart, lungs, stomach, muscles, and skeleton) and their basic functions.</p> <p>Ciencias 2 (Serie Amigos) TG: pages 74-75, 78-79, 81, 84-85 SB: pages 154-155, 158-159, 161, 162, 169-171, 180, 188-189, 192-193. WB: pages 43, 45, 48, 55, 57</p> <p>Rourke Resources: <i>Nuestro esqueleto (Our Skeleton) eBook</i></p>	<p>SC.3.L.14.1 Describe structures in plants and their roles in food production, support, water and nutrient transport, and reproduction.</p> <p>Ciencias 3 (Serie Amigos) TG pages: 23, 26. SB pages: 19, 20-27 WB pages: 6, 7, 11.</p> <p>Rourke Resources: <i>El sabor de las plantas (Flavors From Plants)</i> <i>¡Vivan las plantas! (Hurray for Plants)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 3: Las plantas (Rourke's World of Science Encyclopedia, Volume 3: Plant Life)</i></p>		<p>SC.5.L.14.1 Identify the organs in the human body and describe their functions, including the skin, brain, heart, lungs, stomach, liver, intestines, pancreas, muscles and skeleton, reproductive organs, kidneys, bladder, and sensory organs.</p> <p>Ciencias 5 (Serie Amigos) TG pages: 94-113 SB pages: 250-267 WB pages: 92-111</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 1: El hombre (Rourke's World of Science Encyclopedia, Volume 1: Human Life)</i></p>

Body of Knowledge: Life Science
Big Idea 14: Organization and Development of Living Organisms (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.L.14.2 Recognize that some books and other media portray animals and plants with characteristics and behaviors they do not have in real life.</p> <p>Rourke Resources: <i>Plantas que alimentan (Plant Foods)</i></p>	<p>SC.1.L.14.2 Identify the major parts of plants, including stem, roots, leaves, and flowers.</p> <p><i>Ciencias 1 (Serie Amigos)</i> TG: pages 82-84, 87 SB: pages 198-201, 214 WB: page 59</p> <p>Rourke Resources: <i>Temporada de calabazas (Pumpkin Time)</i></p>		<p>SC.3.L.14.2 Investigate and describe how plants respond to stimuli (heat, light, gravity), such as the way plant stems grow toward light and their roots grow downward in response to gravity.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG pages: 26, 27 SB pages: 28-29, 30, 31-33 WB pages: 8-9</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 3: Las plantas (Rourke’s World of Science Encyclopedia, Volume 3: Plant Life)</i></p>		<p>SC.5.L.14.2 Compare and contrast the function of organs and other physical structures of plants and animals, including humans, for example: some animals have skeletons for support -- some with internal skeletons others with exoskeletons -- while some plants have stems for support.</p> <p><i>Ciencias 5 (Serie Amigos)</i> TG pages: 94-113 SB pages: 250-267 WB pages: 92-111</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 1: El hombre (Rourke’s World of Science Encyclopedia, Volume 1: Human Life)</i></p>

Body of Knowledge: Life Science
Big Idea 14: Organization and Development of Living Organisms (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
<p>SC.K.L.14.3 Observe plants and animals, describe how they are alike and how they are different in the way they look and in the things they do.</p> <p>Ciencias 1 (Serie Amigos) TG: pages 77, 79, 83, 84, 89, 90-92, 95, 97, 98 SB: pages 184, 191, 198-199, 202-203, 218-219, 221, 226-227, 228, 238, 242, 248-249 WB: pages 62-63, 67-69</p> <p>Rourke Resources: <i>Insectos (Insects)</i> <i>El cuerpo de los insectos (Insect's Body)</i> <i>A partir de un huevo (From An Egg) eBook</i> <i>Picos (Beaks and Bills) eBook</i> <i>¿Cómo usan los animales... sus aletas? (How Do Animals Use Their Flippers?) eBook</i> <i>¿Cómo usan los animales... su boca? (How Do Animals Use Their Mouth?) eBook</i></p>	<p>SC.1.L.14.3 Differentiate between living and nonliving things.</p> <p>Ciencias 1 (Serie Amigos) TG: pages 77-78, 80 SB: pages 183-185, 188-189, 194-195 WB: pages 48-49, 50, 53</p> <p>Rourke Resources: <i>Una visita al estanque (At The Pond)</i> <i>Cosas pegajosas (Sticky Stuff)</i> <i>Observemos las rocas (Let's Look At Rocks)</i> <i>Temporada de calabazas (Pumpkin Time)</i> <i>Características de la naturaleza (Our Attribute Walk)</i></p>				

BIG IDEA 15: Diversity and Evolution of Living Organisms



A. Earth is home to a great diversity of living things, but changes in the environment can affect their survival.

B. Individuals of the same kind often differ in their characteristics and sometimes the differences give individuals an advantage in surviving and reproducing.

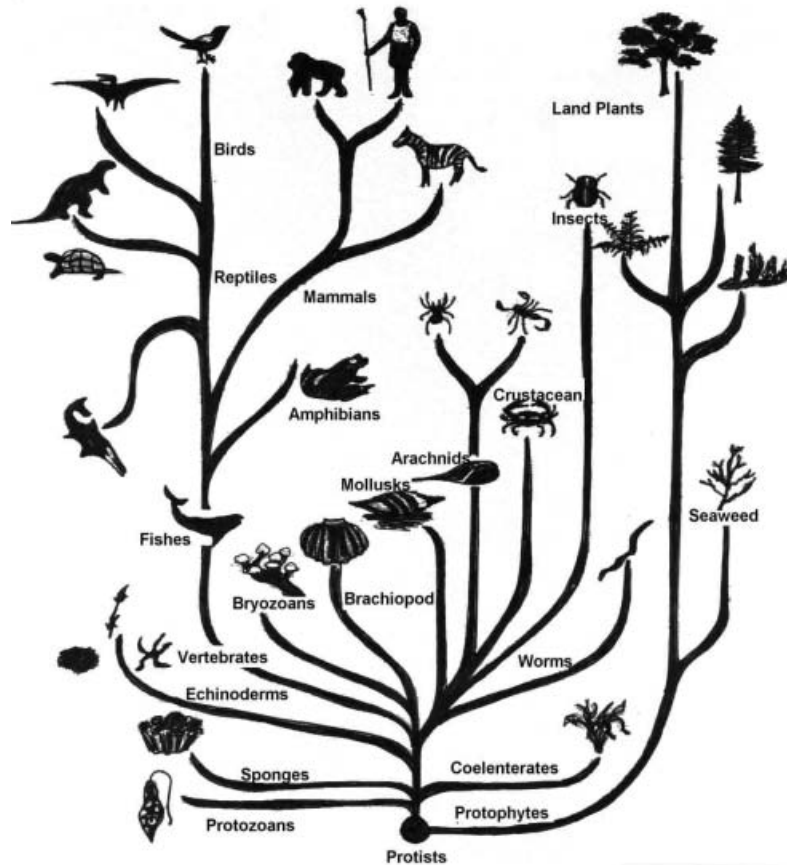
Body of Knowledge: Life Science
Big Idea 15: Diversity and Evolution of Living Organisms

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
			<p>SC.3.L.15.1 Classify animals into major groups (mammals, birds, reptiles, amphibians, fish, arthropods, vertebrates and invertebrates, those having live births and those which lay eggs) according to their physical characteristics and behaviors.</p> <p>Ciencias 3 (Serie Amigos) TG pages: 29-33 SB pages: 35-49 WB pages: 12-16</p> <p>Rourke Resources: <i>Vamos a clasificar (Sorting It All Out)</i> <i>Mamás mamíferos y sus crías (Mammal Moms And Their Young)</i> <i>Animales que andan juntos (Animals Together)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 2: Los animales (Rourke’s World of Science Encyclopedia, Volume 2: Animal Life)</i> <i>Peces (Fish) eBook</i> <i>Insectos (Insects) eBook</i></p>		<p>SC.5.L.15.1 Describe how, when the environment changes, differences between individuals allow some plants and animals to survive and reproduce while others die or move to new locations.</p> <p>Ciencias 5 (Serie Amigos) TG pages: 64-67 SB pages: 160-161 WB pages: 58, 59</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 2: Los animales (Rourke’s World of Science Encyclopedia, Volume 2: Animal Life)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 3: Las plantas (Rourke’s World of Science Encyclopedia, Volume 3: Plant Life)</i></p>

Body of Knowledge: Life Science
Big Idea 15: Diversity and Evolution of Living Organisms (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
			<p>SC.3.L.15.2 Classify flowering and non-flowering plants into major groups such as those that produce seeds, or those like ferns and mosses that produce spores, according to their physical characteristics.</p> <p><i>Ciencias 3 (Serie Amigos)</i> TG pages: 26-27 SB pages: 24-33</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 3: Las plantas (Rourke's World of Science Encyclopedia, Volume 3: Plant Life)</i></p>		

BIG IDEA 16: Heredity and Reproduction



A. Offspring of plants and animals are similar to, but not exactly like, their parents or each other.

B. Life cycles vary among organisms, but reproduction is a major stage in the life cycle of all organisms.

Body of Knowledge: Life Science
Big Idea 16: Heredity and Reproduction

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
	<p>SC.1.L.16.1 Make observations that plants and animals closely resemble their parents, but variations exist among individuals within a population.</p> <p><i>Ciencias 1 (Serie Amigos)</i> TG: pages 85-87, 90-93, 95-97 SB: pages 205-209, 215, 222-223, 226-229, 233, 238, 241-243 WB: pages 66-67, 68-69</p> <p>Rourke Resources: <i>Mamás mamíferos y sus crías (Mammal Moms And Their Young)</i> <i>Temporada de calabazas (Pumpkin Time)</i> <i>Características de la naturaleza (Our Attribute Walk)</i> <i>Hormigas (Ants) eBook</i> <i>Mariposas (Butterflies) eBook</i> <i>Libélulas (Dragonflies) eBook</i></p>	<p>SC.2.L.16.1 Observe and describe major stages in the life cycles of plants and animals, including beans and butterflies.</p> <p><i>Ciencias 2 (Serie Amigos)</i> TG: pages 120-123, 125, 127-133 SB: pages 282-291, 294-295, 299-301, 304-307, 310-311 WB: pages 79, 81, 83-86, 88</p> <p>Rourke Resources: <i>Ciclo de vida de una mariposa monarca (Life Cycle Of A Monarch Butterfly)</i> <i>Temporada de calabazas (Pumpkin Time)</i> <i>Hormigas (Ants) eBook</i> <i>Mariposas (Butterflies) eBook</i> <i>Libélulas (Dragonflies) eBook</i></p>		<p>SC.4.L.16.1 Identify processes of sexual reproduction in flowering plants, including pollination, fertilization (seed production), seed dispersal, and germination.</p> <p><i>Ciencias 4 (Serie Amigos)</i> TG pages: 62-65 SB pages: 148-161 WB page: 54</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 3: Las plantas (Rourke's World of Science Encyclopedia, Volume 3: Plant Life)</i></p>	

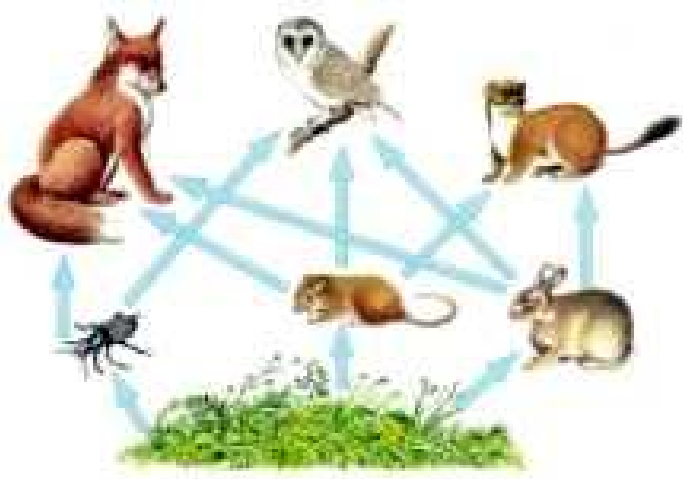
Body of Knowledge: Life Science
Big Idea 16: Heredity and Reproduction (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
				<p>SC.4.L.16.2 Explain that although characteristics of plants and animals are inherited, some characteristics can be affected by the environment.</p> <p><i>Ciencias 4 (Serie Amigos)</i> TG pages: 62-65 SB pages: 150-151, 155-156, 161 WB page: 54</p> <p>Rourke Resources: <i>Las cubiertas protectoras de los animales (Animal Covers)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 2: Los animales (Rourke's World of Science Encyclopedia, Volume 2: Animal Life)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 3: Las plantas (Rourke's World of Science Encyclopedia, Volume 3: Plant Life)</i></p>	

Body of Knowledge: Life Science
Big Idea 16: Heredity and Reproduction (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
				<p>SC.4.L.16.3 Recognize that animal behaviors may be shaped by heredity and learning.</p> <p><i>Ciencias 4 (Serie Amigos)</i> TG pages: 68-73 SB pages: 168-174 WB pages: 64, 65</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 2: Los animales</i> <i>(Rourke's World of Science Encyclopedia, Volume 2: Animal Life)</i></p>	
				<p>SC.4.L.16.4 Compare and contrast the major stages in the life cycles of Florida plants and animals, such as those that undergo incomplete and complete metamorphosis, and flowering and nonflowering seed-bearing plants.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 2: Los animales</i> <i>(Rourke's World of Science Encyclopedia, Volume 2: Animal Life)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 3: Las plantas</i> <i>(Rourke's World of Science Encyclopedia, Volume 3: Plant Life)</i></p>	

BIG IDEA 17: Interdependence



A. Plants and animals, including humans, interact with and depend upon each other and their environment to satisfy their basic needs.

B. Both human activities and natural events can have major impacts on the environment.

C. Energy flows from the sun through producers to consumers.

Body of Knowledge: Life Science
Big Idea 17: Interdependence

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
	<p>SC.1.L.17.1 Through observation, recognize that all plants and animals, including humans, need the basic necessities of air, water, food, and space.</p> <p>Ciencias 1 (Serie Amigos) TG: pages 84, 85-86, 87, 89-90 SB: pages 202-203, 206-209, 214, 219, 220</p> <p>Rourke Resources: <i>Una visita al estanque (At The Pond)</i> <i>Temporada de calabazas (Pumpkin Time)</i> <i>El aire que nos rodea (Air Around Us)</i> <i>Necesidades básicas (Basic Needs)</i> <i>Frutas, vegetales y sus colores (Eating Green)</i> <i>Hormigas (Ants) eBook</i> <i>Sembrar, plantar y podar (Plant and Prune) eBook</i></p>	<p>SC.2.L.17.1 Compare and contrast the basic needs that all living things, including humans, have for survival.</p> <p>Ciencias 2 (Serie Amigos) TG: pages 52-55, 62, 98, 120-124, 128-132 SB: pages 92, 96-97, 100-101, 124-125, 129, 224, 283-285, 288-289, 299-301, 304-307 WB: pages 31, 34, 41, 49, 78, 81, 84, 86-87</p> <p>Rourke Resources: <i>¡Gracias, plantas! (Thank You, Plants)</i> <i>Necesidades básicas (Basic Needs)</i> <i>Animales que andan juntos (Animals Together)</i> <i>Camuflaje y disfraces (Camouflage And Disguise) eBook</i> <i>Hormigas (Ants) eBook</i> <i>¿Cómo usan los animales... su boca? (How Do Animals Use Their Mouth?)</i></p>	<p>SC.3.L.17.1 Describe how animals and plants respond to changing seasons.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 2: Los animales (Rourke's World of Science Encyclopedia, Volume 2: Animal Life)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 3: Las plantas (Rourke's World of Science Encyclopedia, Volume 3: Plant Life)</i></p>	<p>SC.4.L.17.1 Compare the seasonal changes in Florida plants and animals to those in other regions of the country.</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 2: Los animales (Rourke's World of Science Encyclopedia, Volume 2: Animal Life)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 3: Las plantas (Rourke's World of Science Encyclopedia, Volume 3: Plant Life)</i></p>	<p>SC.5.L.17.1 Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics.</p> <p>Ciencias 5 (Serie Amigos) TG pages: 64-67 SB pages: 160-161 WB pages: 58-59</p> <p>Rourke Resources: <i>¡A comer! (Getting Dinner)</i> <i>Vivan las plantas (Hurray For Plants)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 2: Los animales (Rourke's World of Science Encyclopedia, Volume 2: Animal Life)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 3: Las plantas (Rourke's World of Science Encyclopedia, Volume 3: Plant Life)</i></p>

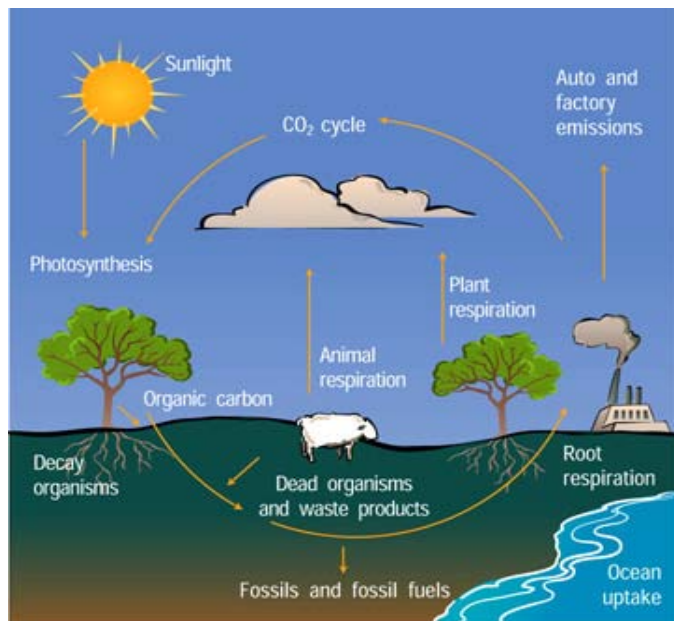
Body of Knowledge: Life Science
Big Idea 17: Interdependence

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
		<p>SC.2.L.17.2 Recognize and explain that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs.</p> <p>Ciencias 2 (Serie Amigos) TG: pages 64-65, 88-89, 127-131, 133, 135-136 SB: pages 130-131, 200-201, 294-295, 310-311, 314-316. WB: pages 32-33, 36, 51, 79, 84-85, 93</p> <p>Rourke Resources: <i>Observemos las aves (Let's Look For Birds)</i> <i>Vamos a clasificar (Sorting It All Out)</i> <i>¿Dónde quieres vivir? (Habitat Homes)</i> <i>Peces (Fish) eBook</i></p>	<p>SC.3.L.17.2 Recognize that plants use energy from the Sun, air, and water to make their own food.</p> <p>Ciencias 3 (Serie Amigos) TG pages: 26-27. SB pages: 29, 30, 32</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 3: Las plantas (Rourke's World of Science Encyclopedia, Volume 3: Plant Life)</i></p>	<p>SC.4.L.17.2 Explain that animals, including humans, cannot make their own food and that when animals eat plants or other animals, the energy stored in the food source is passed to them.</p> <p>Ciencias 4 (Serie Amigos) TG pages: 68-73 SB pages: 168-174 WB pages: 64, 65</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 2: Los animales (Rourke's World of Science Encyclopedia, Volume 2: Animal Life)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 1: El hombre (Rourke's World of Science Encyclopedia, Volume 1: Human Life)</i></p>	

Body of Knowledge: Life Science
Big Idea 17: Interdependence (Continuation)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade
				<p>SC.4.L.17.3 Trace the flow of energy from the Sun as it is transferred along the food chain through the producers to the consumers.</p>	
				<p>SC.4.L.17.4 Recognize ways plants and animals, including humans, can impact the environment.</p> <p>Ciencias 4 (Serie Amigos) TG: 62-65 SB: 150-151</p> <p>Rourke Resources: <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 2: Los animales (Rourke's World of Science Encyclopedia, Volume 2: Animal Life)</i> <i>Descubre el mundo de las ciencias: Enciclopedia, Volumen 4: Las Tierra (Rourke's World of Science Encyclopedia, Volume 4: Earth Science)</i></p>	

Standard 18: Matter and Energy Transformations



A. All living things are composed of four basic categories of macromolecules and share the same basic needs for life.

B. Living organisms acquire the energy they need for life processes through various metabolic pathways (primarily photosynthesis and cellular respiration).

C. Chemical reactions in living things follow basic rules of chemistry and are usually regulated by enzymes.

D. The unique chemical properties of carbon and water make life on Earth possible.

Grade 8

SC.8.L.18.1 Describe and investigate the process of photosynthesis, such as the roles of light, carbon dioxide, water and chlorophyll; production of food; release of oxygen.

SC.8.L.18.2 Describe and investigate how cellular respiration breaks down food to provide energy and releases carbon dioxide.

SC.8.L.18.3 Construct a scientific model of the carbon cycle to show how matter and energy are continuously transferred within and between organisms and their physical environment.

SC.8.L.18.4 Cite evidence that living systems follow the Laws of Conservation of Mass and Energy.

Body of Knowledge: Life Science
Big Idea 18: Matter and Energy Transformation (Starts at Grade 8)

Kindergarten	First Grade	Second Grade	Third Grade	Fourth Grade	Fifth Grade