

A Correlation of Interactive Science ©2016



to the

Missouri Learning Standards Grade Level Expectations for K-5 Science

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Introduction

The following document demonstrates how *Interactive Science*, ©2016, Grades K-5, supports The Missouri Learning Standards and Grade Level Expectations for Grades K-5 Science. Correlation references are to the Student Edition and Teacher Edition. Please note that the Kindergarten Student Edition text pages are two-sided; each singular page contains a corresponding Activity Page on the reverse side.

Interactive Science is an elementary science program that makes learning personal, engaging, and relevant for today's student. The program features an innovative Write-in Student Edition that enables students to become active participants in their learning and truly connect the Big Ideas of science to their world.

The 2016 edition of *Interactive Science* supports the Next Generation Science Standards (NGSS) in several ways. In the Student Edition, lessons provide interactive opportunities for students to acquire the Disciplinary Core Ideas that are the building blocks of the NGSS Performance Expectations at each grade level. STEM Activities, Apply It! activities, Design It! Activities, and Performance-Based Assessments enable students to research, investigate, and apply Science and Engineering Practices to real-world problems in a meaningful way. In the Teacher's Edition, the NGSS Cross-Cutting Concepts that link across grade levels and across disciplines within grade levels are noted at the chapter level, and a detailed and focused Performance Expectation Activity is provided for each NGSS standard.

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Table of Contents

KINDERGARTEN	4
GRADE 1	9
GRADE 2	14
GRADE 3	19
GRADE 4	25
GRADE 5	32

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**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations, Kindergarten	Interactive Science ©2016 Kindergarten
KINDERGARTEN	
PS1 - Matter and Its Interactions	
A - Structure and Properties of Matter	
Make qualitative observations of the physical properties of objects (i.e., size, shape, color, mass).	<p>SE Only: 63, Try It!</p> <p>TE Only: 112, Integrate Your Day: Art 114-115, School-to-Home Letter 118, Try It! 126, Activate Prior Knowledge 127, ELL Support</p>
PS2 - Motion and Stability: Forces and Interactions	
A Forces and Motion	
Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. [Clarification Statement: Examples of pushes or pulls could include a string attached to an object being pulled, a person pushing an object, a person stopping a rolling ball, and two objects colliding and pushing on each other.]	<p>SE Only: 10-11, STEM Activity 18, Investigate It!</p> <p>TE Only: 9, SEP: Planning and Carrying Out Investigations 12-13, STEM Activity 24, Investigate It! 33a, Performance Expectation Activity</p>
Describe ways to change the motion of an object (i.e., how to cause an object to go slower, go faster, go farther, change direction, stop).	<p>SE Only: 4-13, STEM Activity 15, Lesson 2 16, Lesson 3 17, Lesson 4 18, Investigate It!</p> <p>TE Only: 7A-7B, Leveled Content Reader Support 8, Read Aloud 8, For Interactive Whiteboard Classrooms 12-15, STEM Activity 22, Engage/Explore 22, Differentiated Instruction 23, ELL Support 23, Explain/Elaborate 24, Investigate It! 33, Write About Pushes and Pulls</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations, Kindergarten	Interactive Science ©2016 Kindergarten
PS3 - Energy	
A Definitions of Energy	
Make observations to determine the effect of sunlight on Earth’s surface.	<p>SE Only: 44, STEM Activity 56, Lesson 3 60, Investigate It!</p> <p>TE Only: 82, STEM Activity 90, Explore 91, Explain/Elaborate 98, Investigate It! 102-103, Activity Card Support 109c, Performance Expectation Activity 109c, ELA/Literacy 109c, Mathematics</p>
B Conservation of Energy and Energy Transfer	
With prompting and support, use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.	<p>SE Only: 44-53, STEM Activity</p> <p>TE Only: 82-85, STEM Activity 109d, Performance Expectation Activity</p>
PS4 - Waves and Their Applications in technologies for Information Transfer There are no Grade K expectations for this group of standards.	
LS1 - From Molecules to Organisms: Structure and Processes	
C Organization for Matter and Energy Flow in Organisms	
Use observations to describe patterns of what plants and animals (including humans) need to survive. [Clarification Statement: Examples of patterns could include that animals need to take in food but plants do not; the different kinds of food needed by different types of animals; the requirement of plants to have light; and, that all living things need water.]	<p>SE Only: 21, Try It! 35, Lesson 3 36, Lesson 4 37, Lesson 5</p> <p>TE Only: 42, Try It! 52, Activate Prior Knowledge 52, Differentiated Instruction 53, Explain/Elaborate 57, Elaborate 71a, Performance Expectation Activity</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations, Kindergarten	Interactive Science ©2016 Kindergarten
LS2 - Ecosystems: Interactions, Energy, and Dynamics There are no Grade K expectations for this group of standards.	
LS3 - Heredity: Inheritance and Variation of Traits There are no Grade K expectations for this group of standards.	
ESS1 - Earth's Place in the Universe	
B Earth and the Solar System	
Make observations during different seasons to relate the amount of daylight to the time of year. [Clarification Statement: Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall.]	For supporting content on observing the sun and its position in the sky, please see SE Only: 54, Lesson 1 55, Lesson 2 TE Only: 75, Teacher Background 88, Engage/Explore 88, Differentiated Instruction 88, Explain/Elaborate Students expand on their observations of the sun to relate the amount of daylight to the time of year in the <i>Interactive Science</i> Grade 1, Chapter 3 Performance Expectation Activity on p. 139b of the Grade 1 Teacher's Edition.
ESS2 - Earth's Systems	
D Weather and Climate	
Use and share observations of local weather conditions to describe patterns over time. [Clarification Statement: Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months.]	SE Only: 42, Try It! 57, Lesson 4 TE Only: xxxvi-xxxvii, QUEST – Weather and Seasons of the World 80, Try It! 92, 21 st Century Learning 93, ELL Support, Explain/Elaborate 104, Chapter 3 Test- Questions 3, 4 105, Chapter 3 Test- Question 6 107, Make a Weather Calendar 109a, Performance Expectation Activity 109a, ELA/Literacy

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations, Kindergarten	Interactive Science ©2016 Kindergarten
E Biogeology	
With prompting and support, construct an argument using evidence for how plants and animals (including but not limited to humans) can change the environment to meet their needs.	<p>SE Only: 38, Lesson 6 39, Investigate It!</p> <p>TE Only: 58, Explore 58, 21st Century Learning 59, ELL Support, Explain/Elaborate 60, Investigate It! 64-65, Activity Card Support</p>
ESS3 - Earth and Human Activity	
A Natural Resources	
Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live.	<p>TE Only: 69, Make an Animal World 71c, Performance Expectation Activity 71c, ELA/Literacy</p>
B Natural Hazards	
Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.	<p>SE Only: 59, Lesson 6</p> <p>TE Only: 96, Engage/Explore, 21st Century Learning 97, Content Refresher, Explain/Elaborate 104, Chapter 3 Test – Question 2 109e, Performance Expectation Activity 109e, ELA/Literacy 148, Social Studies</p>

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Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations, Kindergarten	Interactive Science ©2016 Kindergarten
ETS1 - Engineering Design	
A Defining and Delimiting Engineering Problems	
Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	<p>SE Only: 23-25, STEM Activity 44-45, STEM Activity 65-67, STEM Activity 86-88, STEM Activity</p> <p>TE Only: 44-45, STEM Activity 82-83, STEM Activity 120-121, STEM Activity 156-157, STEM Activity 109d, Performance Expectation Activity 109d, ELA/Literacy</p>
B Developing Possible Solutions	
Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	<p>SE Only: 26, STEM Activity 46-47, STEM Activity 68, STEM Activity 89, STEM Activity</p> <p>TE Only: 46, STEM Activity 84, STEM Activity 120, STEM Activity 156, STEM Activity 71c, Performance Expectation Activity</p>
C Optimizing the Solution Process	
Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	<p>SE Only: 31-32, STEM Activity 52-53, STEM Activity 73-74, STEM Activity 94-95, STEM Activity</p> <p>TE Only: 47, STEM Activity 85, STEM Activity 123, STEM Activity 159, STEM Activity 33b, Performance Expectation Activity</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 1	Interactive Science ©2016 Grade 1
GRADE 1	
PS1 - Matter and Its Interactions There are no Grade 1 expectations for this group of standards.	
PS2 - Motion and Stability: Forces and Interactions There are no Grade 1 expectations for this group of standards.	
PS3 – Energy	
A Definitions of Energy	
Identify the source of energy that causes an increase in the temperature of an object (e.g., Sun, stove, flame, light bulb).	SE/TE: 3, What makes food cook on a grill? 20–23, Lesson 2 TE Only: 2D, Health 2G–2H, Leveled Content Reader Support 2, Talk About the Picture 21, Activate Prior Knowledge 23, Science Notebook 23b, Lesson 2 Check – Questions 2–4
PS4 - Waves and Their Applications in technologies for Information Transfer	
A Wave Properties	
Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. [Clarification Statement: Examples of vibrating materials that make sound could include tuning forks and plucking a stretched string. Examples of how sound can make matter vibrate could include holding a piece of paper near a speaker making sound and holding an object near a vibrating tuning fork.]	SE/TE: 28, Explore It! 32-33, Investigate It! TE Only: 31a, Explore It! 33a-33d, Activity Card Support 43a, Performance Expectation Activity
C Information Technologies and Instrumentation	
Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance. [Clarification Statement: Examples of devices could include a light source to send signals, paper cup and string “telephones,” and a pattern of drum beats.]	SE/TE: 6-15, STEM Activity 43, Send a Message with Sound TE Only: 43d, Performance Expectation Activity

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 1	Interactive Science ©2016 Grade 1
LS1 - From Molecules to Organisms: Structure and Processes	
A Structure and Function	
<p>Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs. [Clarification Statement: Examples of human problems that can be solved by mimicking plant or animal solutions could include designing clothing or equipment to protect bicyclists by mimicking turtle shells, acorn shells, and animal scales; stabilizing structures by mimicking animal tails and roots on plants; keeping out intruders by mimicking thorns on branches and animal quills; and, detecting intruders by mimicking eyes and ears.]</p>	<p>SE/TE: 99, Design a Helmet</p> <p>TE Only: 99a, Performance Expectation Activity 99a, ELA/Literacy</p>
LS2 - Ecosystems: Interactions, Energy, and Dynamics	
There are no Grade 1 expectations for this group of standards.	
LS3 - Heredity: Inheritance and Variation of Traits	
A Inheritance of Traits	
<p>Make observations to construct an evidence based account that young plants and animals are like, but not exactly like, their parents. [Clarification Statement: Examples of patterns could include features plants or animals share. Examples of observations could include leaves from the same kind of plant are the same shape but can differ in size; and, a particular breed of dog looks like its parents but is not exactly the same.]</p>	<p>SE/TE: 44, How is a young orangutan like its mother? 72-73, Envision It! 75, A baby sea turtle... 76, Life Cycle of a Grasshopper 78-81, Lesson 5 95, Chapter Review – Lesson 5</p> <p>TE Only: 44C, Critical Thinking 44G-44H, Leveled Content Reader Support 81a, Explore It! 81b, Lesson 5 Check, Question 4 95a, Chapter 2 Test – Question 3 95b, Chapter 2 Test – Question 8 99c, Performance Expectation Activity</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 1	Interactive Science ©2016 Grade 1
ESS1 - Earth's Place in the Universe	
A The Universe and its Stars	
Describe the presence of the Sun, Moon, and stars in the sky over time.	<p>SE/TE: 103, Let's Read Science! 115, The Nearest Star 118, Explore It! 118-123, Lesson 2 128-129, Investigate It! 134, Chapter Review – Lesson 2</p> <p>TE Only: 100C, Reading 100G-100H, Leveled Content Reader Support 116, Science Notebook 123b, Lesson 2 Check – Questions 2, 3, 5 129b, Directed Inquiry 129d, Open Inquiry</p>
Use observations of the sun, moon, and stars to describe patterns that can be predicted. [Clarification Statement: Examples of patterns could include that the sun and moon appear to rise in one part of the sky, move across the sky, and set; and stars other than our sun are visible at night but not during the day.]	<p>SE/TE: 102, Try It! 118, Explore It! 118-123, Lesson 2 134, Chapter Review – Lesson 2 139, Day and Night 139, Sunrise, Sunset</p> <p>TE Only: 100C, Reading 100C, Social Studies 100, CCC Patterns 123a, Explore It! 123b, Lesson 2 Check – Questions 1, 5 139a, Performance Expectation Activity 139a, ELA/Literacy 139b, Performance Expectation Activity 139b, Mathematics</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 1	Interactive Science ©2016 Grade 1
ESS2 - Earth's Systems	
D Weather and Climate	
Identify patterns indicating relationships between observed weather data and weather phenomena (e.g., temperature and types of precipitation, clouds and amounts of precipitation).	For supporting content, see SE/TE: 124-127, Lesson 3 130, NASA Careers: Meteorologist 135, Chapter Review – Lesson 3 TE Only: 100D, Health 127b, Lesson 3 Check – Questions 3-5
ESS3 - Earth and Human Activity There are no Grade 1 expectations for this group of standards.	
ETS1 - Engineering Design	
A Defining and Delimiting Engineering Problems	
Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	SE/TE: 6, Let's Talk 7, Find a Problem 48, Mix It Up! 49, Find a Problem 50-51, Plan and Draw 104, How Does a Greenhouse Work? 105, Find a Problem 106-107, Plan and Draw 144, What's Over the Wall? 145, Find a Problem 146, Plan and Draw 190, Reach, Grab, Pull 191, Find a Problem 192, Plan and Draw 222, Find a Problem TE Only: 43d, Performance Expectation Activity

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 1	Interactive Science ©2016 Grade 1
B Developing Possible Solutions	
Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	<p>SE/TE: 7, Question 2 8, Question 4 11, Question 10 12, Question 12 15, Question 18 49, Question 2 53, Question 10 55, Question 12 57, Question 16 105, Question 2 109, Question 9 110, Question 11 113, Question 16 145, Question 2 146, Question 4 147, Question 5 149, Question 9 151, Question 12 153, Question 16 191, Question 2 192, Question 4 195, Question 9 196, Question 11 199, Question 18 223, Question 3 225, Question 7</p> <p>TE Only: 99a, Performance Expectation Activity</p>
C Optimizing the Solution Process	
Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.	<p>SE/TE: 14-15, Record and Share 56-57, Record and Share 112-113, Record and Share 152-153, Record and Share 198-199, Record and Share 226-227, Record and Share</p> <p>TE Only: 43c, Performance Expectation Activity</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 2	Interactive Science ©2016 Grade 2
GRADE 2	
PS1 - Matter and Its Interactions	
A - Structure and Properties of Matter	
Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties. [Clarification Statement: Observations could include color, texture, hardness, and flexibility. Patterns could include the similar properties that different materials share.]	<p>SE/TE: 16, Explore It! 18, At-Home Lab, Describe Materials 60, Group Objects</p> <p>TE Only: 18, Differentiated Instruction 21, Science Notebook 22, Differentiated Instruction 23a, Explore It! 43, Differentiated Instruction 46, Differentiated Instruction 61a, Performance Expectation Activity</p>
Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose. [Clarification Statement: Examples of properties could include, strength, flexibility, hardness, texture, and absorbency.]	<p>SE/TE: 6-15, STEM Activity 40, Explore It! 47, Lightning Lab, Build a Tower</p> <p>TE Only: 2G-2H, Leveled Content Reader Support 47a, Explore It! 61b, Performance Expectation Activity 61b, ELA/Literacy 61c, Performance Expectation Activity 61c, ELA/Literacy</p>
PS2 - Motion and Stability: Forces and Interactions	
A Forces and Motion	
Analyze data to determine how the motion of an object changed by an applied force or the mass of an object.	This expectation falls outside the Grade 2 program. Students study the effects of applied force and mass on the motion of an object in <i>Interactive Science</i> , Grade 3, Chapter 1: Forces and Motion, Lesson 2: How does force affect motion?
PS3 – Energy	
There are no Grade 2 expectations for this group of standards.	

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 2	Interactive Science ©2016 Grade 2
PS4 - Waves and Their Applications in technologies for Information Transfer	
A Wave Properties	
Plan and conduct investigations to provide evidence that changes in vibration create change in sound.	SE/TE: 164-173, STEM Activity
LS1 - From Molecules to Organisms: Structure and Processes There are no Grade 2 expectations for this group of standards.	
LS2 - Ecosystems: Interactions, Energy, and Dynamics	
A Interdependent Relationships in Ecosystems	
Plan and conduct investigations on the growth of plants when growing conditions are altered (e.g., dark vs. light, water vs. no water).	SE/TE: 64, Try It! 79, Go Green: Air in Soil 104-105, Investigate It! 116, Light and Seeds TE Only: 117a, Performance Expectation Activity
Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.	TE Only: 117b, Performance Expectation Activity
LS3 - Heredity: Inheritance and Variation of Traits There are no Grade 2 expectations for this group of standards.	
ESS1 - Earth's Place in the Universe	
C The History of Planet Earth	
Use information from several sources to provide evidence that Earth events can occur quickly or slowly. [Clarification Statement: Examples of events and timescales could include volcanic explosions and earthquakes, which happen quickly and erosion of rocks, which occurs slowly.]	SE/TE: 138, Explore It! 138-143, Lesson 2 148-149, Investigate It! 158, Erosion TE Only: 139, Explain 141, Science Notebook 143a, Explore It! 143b, Lesson 2 Check – Question 5 155b, Chapter 3 Test – Questions 7, 8 159a, Performance Expectation Activity 159a, ELA/Literacy

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 2	Interactive Science ©2016 Grade 2
ESS2 - Earth's Systems	
A Earth Materials and Systems	
Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land. [Clarification Statement: Examples of solutions could include different designs of dikes and windbreaks to hold back wind and water, and different designs for using shrubs, grass, and trees to hold back the land.]	TE Only: 140, Differentiated Instruction 159b, Performance Expectation Activity 159b, ELA/Literacy
B Plate Tectonics and Large-Scale Systems	
Develop a model to represent the shapes and kinds of land and bodies of water in an area.	SE/TE: 159, Make a Puzzle TE Only: 135, 21 st Century Learning 159c, Performance Expectation Activity
C The Role of Water in Earth's Surface Processes	
Obtain information to identify where water is found on Earth and that it can be solid or liquid.	SE/TE: 120, Try It! 133, Land and Water 135, Water surrounds an island 136-137, The Ocean/Lakes and Ponds/Rivers and Streams/Glaciers 154, Chapter Review – Lesson 1 159, Make a Puzzle TE Only: 136, Content Refresher 137, Science Notebook 137b, Lesson 1 Check – Question 4 159c, Performance Expectation Activity 159d, Performance Expectation Activity 159d, ELA/Literacy
ESS3 - Earth and Human Activity There are no Grade 2 expectations for this group of standards.	

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 2	Interactive Science ©2016 Grade 2
ETS1 - Engineering Design	
A Defining and Delimiting Engineering Problems	
Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.	<p>SE/TE: 6-7, Find a Problem 66-67, Find a Problem 122-123, Find a Problem 164-165, Find a Problem 208-209, Find a Problem 242-243, Find a Problem 242, Find a Problem</p> <p>TE Only: 61c, Performance Expectation Activity</p>
B Developing Possible Solutions	
Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.	<p>SE/TE: 69, Question 6 71, Question 9 72, Question 10 75, Question 15 128, Question 12 130, Question 15 165, Question 2 166, Question 3 169, Question 9 170, Question 10 173, Question 17 211, Question 6 213, Question 9 214, Question 10 217, Question 15 243, Question 3</p> <p>TE Only: 117b, Performance Expectation Activity</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 2	Interactive Science ©2016 Grade 2
C Optimizing the Solution Process	
<p>Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.</p>	<p>SE/TE: 12-13, Make and Test 14-15, Record and Share 74-75, Record and Share 128-129, Make and Test 130- 131, Record and Share 172-173, Record and Share 216-217, Record and Share 245, Make and Test 246-247, Record and Share</p> <p>TE Only: 159b, Performance Expectation Activity</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 3	Interactive Science ©2016 Grade 3
GRADE 3	
PS1 - Matter and Its Interactions	
A - Structure and Properties of Matter	
Predict and investigate that water can change from a liquid to a solid (freeze), and back again (melt), or from a liquid to a gas (evaporation), and back again (condensation) as the result of temperature changes.	This expectation is addressed in <i>Interactive Science</i> , Grade 2, Chapter 1: Matter, Lesson 4: How can water change?
B Types of Interactions of Matter	
Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.	This expectation is addressed in <i>Interactive Science</i> , Grade 2, Chapter 1 by the Performance Expectation and ELA/Literacy Activities on p. 61d of the Teacher’s Edition.
PS2 - Motion and Stability: Forces and Interactions	
B Types of Interaction	
Plan and conduct investigations to determine the cause and effect relationship of electric or magnetic interactions between two objects not in contact with each other. [Clarification Statement: Examples of an electric force could include the force on hair from an electrically charged balloon and the electrical forces between a charged rod and pieces of paper; examples of a magnetic force could include the force between two permanent magnets, the force between an electromagnet and steel paperclips, and the force exerted by one magnet versus the force exerted by two magnets. Examples of cause and effect relationships could include how the distance between objects affects strength of the force and how the orientation of magnets affects the direction of the magnetic force.]	SE/TE: 2, Try It! TE Only: 99c, Performance Expectation Activity 99c, ELA/Literacy 99d, Performance Expectation Activity
PS3 - Energy There are no Grade 3 expectations for this group of standards.	
PS4 - Waves and Their Applications in technologies for Information Transfer There are no Grade 3 expectations for this group of standards.	

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 3	Interactive Science ©2016 Grade 3
LS1 - From Molecules to Organisms: Structure and Processes	
A Structure and Function	
Construct an argument with evidence that in a particular ecosystem some organisms -- based on structural adaptations or behaviors -- can survive well, some survive less well, and some cannot survive at all. [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]	<p>SE/TE: 217, Ecosystem Change 221, Seasonal Change 237, Chapter Review – Lesson 4 240-243, Apply It! 244, Animals and Seasons</p> <p>TE Only: 196C-196D, Teacher Background 223b, Lesson 3 Check – Question 6 245g, Performance Expectation Activity 245g, ELA/Literacy</p>
B Growth and Development of Organisms	
Develop a model to compare and contrast observations on the life cycle of different plants and animals. [Clarification Statement: Changes organisms go through during their life form a pattern.]	<p>SE/TE: 138: At-Home Lab: Draw a Life Cycle 176, Explore It! 183, Got It? – Question 10 245, Life Cycle Poster</p> <p>TE Only: 101, SEP Developing and Using Models 137, 21st Century Learning 139, Response to Intervention 179, 21st Century Learning 183a, Explore It! 245a, Performance Expectation Activity</p>
LS2 - Ecosystems: Interactions, Energy, and Dynamics	
There are no Grade 3 expectations for this group of standards.	

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

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LS3 - Heredity: Inheritance and Variation of Traits	
A Inheritance of Traits	
<p>Construct scientific arguments to support claims that some characteristics of organisms are inherited from parents and some are influenced by the environment. [Clarification Statement: Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted; and, a pet dog that is given too much food and little exercise may become overweight.]</p>	<p>SE/TE: 129, Reproduction 168, My Planet Diary 169, Both Alike and Different 170, Inherited Characteristics 171, Acquired Characteristics 172, Inherited Behavior 173, Learned Behavior 175, Got It? – Question 12 194, Benchmark Practice – Question 5 245, Matching Traits</p> <p>TE Only: 175a, My Planet Diary 175b, Lesson 2 Check – Questions 3, 6 182, Elaborate 245c, Performance Expectation Activity 245c, ELA/Literacy 245d, Performance Expectation Activity 245d, ELA/Literacy</p>
B Natural Selection	
<p>Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving and finding mates. [Clarification Statement: Examples of cause and effect relationships could be plants that have larger thorns than other plants may be less likely to be eaten by predators; and, animals that have better camouflage coloration than other animals may be more likely to survive and therefore more likely to leave offspring.]</p>	<p>SE/TE: 170, Inherited Characteristics 171, Acquired Characteristics 174-175, Small Differences in Traits</p> <p>TE Only: 245b, Performance Expectation Activity 245c, Performance Expectation Activity 245c, ELA/Literacy</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 3	Interactive Science ©2016 Grade 3
C Adaptation	
Construct an argument with evidence that in a particular ecosystem some organisms -- based on structural adaptations or behaviors -- can survive well, some survive less well, and some cannot. [Clarification Statement: Examples of evidence could include needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.]	<p>SE/TE: 217, Ecosystem Change 221, Seasonal Change 237, Chapter Review – Lesson 4 240-243, Apply It! 244, Animals and Seasons</p> <p>TE Only: 196C-196D, Teacher Background 223b, Lesson 3 Check – Question 6 245g, Performance Expectation Activity 245g, ELA/Literacy</p>
D Biodiversity and Humans	
Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change. [Clarification Statement: Examples of environmental changes could include changes in land characteristics, water distribution, temperature, food, and other organisms.]	<p>SE/TE: 205, Places for Living Things 209, Ecosystems Change 217-223, Lesson 3 219, Do the Math 238, Benchmark Practice – Question 3</p> <p>TE Only: 196, Content Refresher 204, 21st Century Learning 209a, My Planet Diary 219, 21st Century Learning 245h, Performance Expectation Activity 245h, ELA/Literacy</p>
ESS1 - Earth's Place in the Universe There are no Grade 3 expectations for this group of standards.	
ESS2 - Earth's Systems	
D Weather and Climate	
Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. [Clarification Statement: Examples of data could include average temperature, precipitation, and wind direction.]	<p>SE/TE: 258, Explore It! 289, Measure Rainfall</p> <p>TE Only: 261, Science Notebook 265a, Explore It! 289a, Performance Expectation Activity</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 3	Interactive Science ©2016 Grade 3
Obtain and combine information to describe climates in different regions of the world.	<p>SE/TE: 260-261, Climate</p> <p>TE Only: 112, Science – Social Studies 261, Science Notebook 283b, Chapter 6 Test – Question 9 289b, Performance Expectation Activity 289b, ELA/Literacy</p>
ESS3 - Earth and Human Activity	
B Natural Hazards	
Make a claim about the merit of an existing design solution (e.g. levies, tornado shelters, sea walls, etc.) that reduces the impacts of a weather-related hazard. [Clarification Statement: Examples of design solutions to weather-related hazards could include barriers to prevent flooding, wind resistant roofs, and lightning rods.]	<p>SE/TE: 250-253, STEM Activity 270-275, Lesson 4 283, Chapter Review – Lesson 4 284, Benchmark Practice – Question 6 303, Science Skills</p> <p>TE Only: 246G-246H, Leveled Content Reader Support 272, Common Misconception 275a, Explore It! 275b, Lesson 4 Check – Question 6 289c, Performance Expectation Activity 289c, ELA/Literacy</p>
ETS1 - Engineering Design	
A Defining and Delimiting Engineering Problems	
Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	<p>SE/TE: 4-6, STEM Activity 42-44, STEM Activity 99, Solve a Problem 104-105, STEM Activity 156-157, STEM Activity 200-202, STEM Activity 250-251, STEM Activity 294-296, STEM Activity 342-344, STEM Activity 357-361, Design Process 374-376, Design It!</p> <p>TE Only: 99d, Performance Expectation Activity</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 3	Interactive Science ©2016 Grade 3
B Developing Possible Solutions	
<p>Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.</p>	<p>SE/TE: 5, Develop Possible Solutions/Choose One Solution 7, Question 14 157, Develop Possible Solutions/Choose One Solution 251, Develop Possible Solutions/Choose One Solution 295-296, Develop Possible Solutions/Choose One Solution 345, Question 14 376, Develop Possible Solutions/Choose One Solution</p> <p>In the Post-Activity Discussion for each chapter’s STEM Activity, students compare the solutions they have generated and present those which most successfully met the problem criteria and constraints. For representative pages, please see</p> <p>TE Only: 44, Post-Activity Discussion 106, Post-Activity Discussion 252, Post-Activity Discussion 296, Post-Activity Discussion 344, Post-Activity Discussion</p>
C Optimizing the Solution Process	
<p>Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p>	<p>SE/TE: 6-7, STEM Activity 44-45, STEM Activity 106-107, STEM Activity 158-159, STEM Activity 202-203, STEM Activity 252-253, STEM Activity 296-297, STEM Activity 345, STEM Activity 378-379, Test the Prototype/Evaluate and Redesign</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 4	Interactive Science ©2016 Grade 4
GRADE 4	
PS1 - Matter and Its Interactions There are no Grade 4 expectations for this group of standards.	
PS2 - Motion and Stability: Forces and Interactions	
A Forces and Motion	
Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.	This expectation is addressed in <i>Interactive Science</i> , Grade 3, Chapter 1 by the Performance Expectation and ELA/Literacy Activities on p. 99b of the Teacher's Edition.
Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. [Clarification Statement: Examples could include an unbalanced force on one side of a ball can make it start moving; and, balanced forces pushing on a box from both sides will not produce any motion at all.]	This expectation is addressed in <i>Interactive Science</i> , Grade 3, Chapter 1 by the Performance Expectation and ELA/Literacy Activities on p. 99a of the Teacher's Edition.
B Types of Interaction	
Plan and conduct a fair test to compare and contrast the forces (measured by a spring scale in Newtons) required to overcome friction when an object moves over different surfaces (i.e., rough/smooth).	SE/TE: 68-69, Investigate It! TE Only: 46G-46H, Leveled Content Reader Support 69a-69d, Activity Card Support
Predict how changes in either the amount of force applied to an object or the mass of the object affects the motion (speed and direction) of the object.	SE/TE: 58, Forces Affect Objects 59, Force and Motion 59 Lightning Lab 60, Force and Mass 60-61, Force and Gravity 64, At-Home Lab 76, Benchmark Practice- Question 5 TE Only: 60, Science Notebook 60, 21 st Century Learning

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 4	Interactive Science ©2016 Grade 4
PS3 – Energy	
A Definitions of Energy	
Use evidence to construct an explanation relating the speed of an object to the energy of that object.	<p>SE/TE: 10, Forms of Energy 62, Explore It! 63, Speed 75, Chapter Review, Lesson 2 76, Benchmark Practice- Question 3</p> <p>TE Only: 1G-1H, Leveled Content Reader Support 111a, Performance Expectation Activity 111a, ELA/Literacy</p>
B Conservation of Energy and Energy Transfer	
Provide evidence to construct an explanation of an energy transformation(e.g. temperature change, light, sound, motion, and magnetic effects)	<p>SE/TE: 10-11, Forms of Energy 92, Explore It! 92-95, Lesson 2 95, At-Home Lab</p> <p>TE Only: 11, Science – Writing 93, ELL Support: 3 Comprehensible Input 93, Science – Social Studies 95, Differentiated Instruction 95a, Explore It! 111b, Performance Expectation Activity 111b, ELA/Literacy</p>
Apply scientific ideas to design, test, and refine a device that converts energy from one form to another. [Clarification Statement: Examples of devices could include electric circuits that convert electrical energy into motion energy of a vehicle, light, or sound; and, a passive solar heater that converts light into heat. Examples of constraints could include the materials, cost, or time to design the device.]	<p>SE/TE: 45, Solar Cooking 96-97, Investigate It! 111, Design a Device</p> <p>TE Only: 97a-97d, Activity Card Support 111d, Performance Expectation Activity</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 4	Interactive Science ©2016 Grade 4
C Relationship Between Energy and Forces	
Use models to explain that simple machines change the amount of effort force and/or direction of force. [Clarification Statement: memorization of a simple machine is not the focus, concept builds on the application of force and motion.]	This expectation is addressed in <i>Interactive Science</i> , Grade 3, Skills Handbook Part 2: Technology and the Design Process, Lesson 2: What is a machine?
PS4 - Waves and Their Applications in technologies for Information Transfer	
A Wave Properties	
Develop a model of waves to describe patterns in terms of amplitude or wavelength and that waves can cause objects to move. (Boundary: The terms amplitude and wavelength should not be assessed.) [Clarification Statement: Examples of models could include diagrams, analogies, and physical models using wire to illustrate wavelength and amplitude of waves.]	<p>SE/TE: 18, How Sounds Travels 19, Frequency and Wavelength 20-21, Pitch/Volume</p> <p>TE Only: 18, Content Refresher 19, Science Notebook 21, Differentiated Instruction: On-Level 111e, Performance Expectation Activity</p>
LS1 - From Molecules to Organisms: Structure and Processes	
A Structure and Function	
Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and plant reproduction. [Clarification Statement: Examples of structures could include thorns, stems, roots, colored petals, heart, stomach, lung, brain, and skin.]	<p>SE/TE: 114, Try It! 122-123, Classifying Plants 124-127, Classifying Animals 128-135, Lesson 2 136-141, Lesson 3 142-147, Lesson 4 170, Chapter Review – Lessons 1-4 172, Benchmark Practice – Questions 4, 5, 6</p> <p>TE Only: xlvi-xlvi, QUEST: Make a Human Body Road Map 112G-112H, Leveled Content Reader Support 127b, Lesson 1 Check – Questions 1-5 135a, My Planet Diary 135b, Lesson 2 Check – Questions 4-6 141a, Explore It! 141b, Lesson 3 Check – Questions 1-6 147b, Lesson 4 Check – Questions 2, 4, 5, 6 171a-171b, Chapter 4 Test – Questions 2, 3, 5, 9 229a, Performance Expectation Activity</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 4	Interactive Science ©2016 Grade 4
D Information Processing	
Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways. [Clarification Statement: Emphasis is on systems of information transfer.]	<p>SE/TE: 154, My Planet Diary 229, Research Animal Instincts</p> <p>TE Only: 155, Content Refresher 158, Science Notebook 159a, My Planet Diary 229b, Performance Expectation Activity</p>
LS2 - Ecosystems: Interactions, Energy, and Dynamics There are no Grade 4 expectations for this group of standards.	
LS3 - Heredity: Inheritance and Variation of Traits There are no Grade 4 expectations for this group of standards.	
ESS1 - Earth's Place in the Universe	
C The History of Planet Earth	
Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time. [Clarification Statement: Examples of evidence from patterns could include rock layers with marine shell fossils above rock layers with plant fossils and no shells, indicating a change from land to water over time; and, a canyon with different rock layers in the walls and a river in the bottom, indicating that over time a river cut through the rock.]	<p>SE/TE: 207-211, Lesson 5 221, Chapter Review – Lesson 5 244-251, Lesson 2 260, My Planet Diary 261, Earth's Moving Plates 262, Volcanoes 263, Earthquakes 286, Chapter Review – Lesson 2</p> <p>TE Only: 211b, Lesson 5 Check – Question 4 221b, Chapter 5 Test – Question 8 229c, Performance Expectation Activity 229c, ELA/Literacy 230C, Teacher Background 230G-230H, Leveled Content Reader Support 253a, Explore It! 253b, Lesson 2 Check – Questions 1-6 287b, Chapter 6 Test – Questions 7, 8 295d, Performance Expectation Activity 295d, ELA/Literacy</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 4	Interactive Science ©2016 Grade 4
ESS2 - Earth's Systems	
A Earth Materials and Systems	
Plan and conduct scientific investigations or simulations to provide evidence how natural processes (e.g. weathering and erosion) shape Earth's surfaces.	<p>SE/TE: 254, Explore It! 258, At-Home Lab 278-279, Investigate It! 290-293, Apply It!</p> <p>TE Only: 259a, Explore It! 279a-279d, Activity Card Support 295a, Performance Expectation Activity</p>
B Plate Tectonics and Large-Scale Systems	
Analyze and interpret data from maps to describe patterns of Earth's features. [Clarification Statement: Maps can include topographic maps of Earth's land and ocean floor, as well as maps of the locations of mountains, continental boundaries, volcanoes, and earthquakes.]	<p>SE/TE: 295, Create a Booklet 295, Make a Map</p> <p>TE Only: 248, Science – Social Studies 263, Science – Social Studies 269, Science – Social Studies 276, Differentiated Instruction 295b, Performance Expectation Activity 295b, ELA/Literacy</p>
ESS3 - Earth and Human Activity	
A Natural Resources	
Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans. [Clarification Statement: Examples of solutions could include designing an earthquake resistant building and improving monitoring of volcanic activity.]	<p>TE Only: 260, Content Refresher 295c, Performance Expectation Activity 295c, ELA/Literacy</p>

**A Correlation of interactive Science ©2016 to the
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Missouri Learning Standards Grade-Level Expectations for Grade 4	Interactive Science ©2016 Grade 4
ETS1 - Engineering Design	
A Defining and Delimiting Engineering Problems	
Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	<p>SE/TE: 4-6, STEM Activity 50-52, STEM Activity 82-83, STEM Activity 116-118, STEM Activity 178-179, STEM Activity 234-235, STEM Activity 300-302, STEM Activity 346-348, STEM Activity 357-363, Design Process 374-376, Design It!</p> <p>TE Only: 111d, Performance Expectation Activity 358, Science Notebook</p>
B Developing Possible Solutions	
Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	<p>SE/TE: 235, Develop Possible Solutions/Choose One Solution 302, Develop Possible Solutions/Choose One Solution 376, Develop Possible Solutions/Choose One Solution</p> <p>TE Only: 295c, Performance Expectation Activity 360, Science Notebook 360, Common Misconception</p> <p>Additionally, in the Post-Activity Discussion for each chapter’s STEM Activity, students compare the solutions they have generated and present those which most successfully met the problem criteria and constraints. For representative pages, please see</p> <p>TE Only: 6, Post-Activity Discussion 84, Post-Activity Discussion 180, Post-Activity Discussion 236, Post-Activity Discussion 302, Post-Activity Discussion</p>

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Missouri Learning Standards Grade-Level Expectations for Grade 4	Interactive Science ©2016 Grade 4
C Optimizing the Solution Process	
<p>Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.</p>	<p>SE/TE: 6-7, STEM Activity 53, STEM Activity 84-85, STEM Activity 119, STEM Activity 180-181, STEM Activity 236-237, STEM Activity 303, STEM Activity 349, STEM Activity 378-379, Test the Prototype/ Evaluate and Redesign</p> <p>TE Only: 295c, Performance Expectation Activity</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 5	Interactive Science ©2016 Grade 5
GRADE 5	
PS1 - Matter and Its Interactions	
A - Structure and Properties of Matter	
<p>Develop a model to describe that matter is made of particles too small to be seen. [Clarification Statement: Examples of evidence supporting a model could include adding air to expand a basketball, compressing air in a syringe, dissolving sugar in water, and evaporating salt water.]</p>	<p>SE/TE: 12, Atoms 16, Explore It! 22, Explore It! 34, Explore It! 36, At-Home Lab</p> <p>TE Only: 1D, Teacher Background 9, ELL Support: Comprehensible Input 12, Differentiated Instruction 15, Response to Intervention 21a, Explore It! 27a, Explore It! 33, Common Misconception 39a, Explore It! 99a, Performance Expectation Activity</p>
<p>Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances, the total weight of matter is conserved. [Clarification Statement: Examples of reactions or changes could include phase changes, dissolving, and mixing that form new substances.]</p>	<p>SE/TE: 2, Try It!</p> <p>TE Only: 99b, Performance Expectation Activity 99b, ELA/Literacy</p>
B Types of Interactions of Matter	
<p>Plan and conduct investigations to separate the components of a mixture/solution by their physical properties (i.e., sorting, filtration, magnets, screening).</p>	<p>SE/TE: 28, Explore It! 30, Separating Mixtures 33, Got It? – Question 11 40-41, Investigate It! 50, Benchmark Practice – Question 6</p> <p>TE Only: 30, Teacher to Teacher 31, Science – Writing 33, Common Misconception 41a-41d, Activity Card Support 49b, Chapter 1 Test – Question 9</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 5	Interactive Science ©2016 Grade 5
Conduct an investigation to determine whether the combining of two or more substances results in new substances.	<p>SE/TE: 38, Lightning Lab 99, Investigate Mixtures 362, Try It!</p> <p>TE Only: 99d, Performance Expectation Activity</p>
PS2 - Motion and Stability: Forces and Interactions	
B Types of Interaction	
Support an argument that the gravitational force exerted by Earth on objects is directed toward the planet's center. [Clarification Statement: "Down" is a local description of the direction that points toward the center of the spherical Earth.]	<p>SE/TE: 64, Gravity 64, At-Home Lab</p> <p>TE Only: 99e, Performance Expectation Activity 99e, ELA/Literacy</p>
PS3 - Energy	
D Energy in Chemical Process and Everyday	
Use models to describe that energy stored in food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun. [Clarification Statement: Examples of models could include diagrams, and flow charts.]	<p>SE/TE: 154-155, Photosynthesis 156-157, Respiration 162, Lightning Lab 195, Create a Food Web Model</p> <p>TE Only: 157, Differentiated Instruction 195a, Performance Expectation Activity 195a, ELA/Literacy</p>
PS4 - Waves and Their Applications in technologies for Information Transfer	
A Wave Properties	
Develop a model to describe that objects can be seen only when light is reflected off them or when they produce their own light.	This expectation is addressed in <i>Interactive Science</i> , Grade 4, Chapter 1 by the Performance Expectation, ELA/Literacy, and Mathematics Activities on p. 111g of the Grade 4 Teacher's Edition.

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 5	Interactive Science ©2016 Grade 5
LS1 - From Molecules to Organisms: Structure and Processes	
A Structure and Function	
Compare and contrast the major organs/organ systems (e.g. support, reproductive, digestive, transport/circulatory, excretory, response) that perform similar functions for animals belonging to different vertebrate classes.	<p>SE/TE: 108-113, Lesson 1 120, Explore It! 138, Chapter 3 Review – Lesson 1</p> <p>TE Only: 110, 21st Century Learning 112, Content Refresher 113, ELL Support 125a, Explore It!</p>
C Organization for Matter and Energy Flow in Organisms	
Support an argument that plants get the materials (i.e. carbon dioxide, water, sunlight) they need for growth chiefly from air and water. [Clarification Statement: Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil. Clarification Statement: [Do not assess photosynthesis.]	<p>SE/TE: 112-113, Structures for Respiration and Circulation 114, Explore It! 115, Plant Adaptations 132-133, Investigate It! 156-157, Respiration</p> <p>TE Only: 119a, Explore It! 133a-133d, Activity Card Support 195b, Performance Expectation Activity 195b, ELA/Literacy 119a, Explore It! 195b, Performance Expectation Activity 195b, ELA/Literacy</p>
LS2 - Ecosystems: Interactions, Energy, and Dynamics	
B Cycles of Matter and Energy Transfer in Ecosystems	
Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment. [Clarification Statement: Emphasis is on the idea that matter that is not food (air, water, decomposed materials in soil) is changed by plants into matter that is food. Examples of systems could include organisms, ecosystems, and the Earth.]	<p>SE/TE: 162, Lightning Lab 162-163, Food Chains/Food Webs 195, Create a Food Web Model</p> <p>TE Only: 142, CCC Systems and System Models 143, SEP Developing and Using Models 163, Science Notebook 195a, Performance Expectation Activity 195c, Performance Expectation Activity</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 5	Interactive Science ©2016 Grade 5
LS3 - Heredity: Inheritance and Variation of Traits There are no Grade 5 expectations for this group of standards.	
ESS1 - Earth's Place in the Universe	
A The Universe and its Stars	
Support an argument that relative distances from Earth affects the apparent brightness of the sun compared to other stars.	SE/TE: 270, Mt Planet Diary 275, Got It? – Question 9 TE Only: 313c, Performance Expectation Activity 313c, ELA/Literacy
B Earth and the Solar System	
Make observations during different seasons to relate the amount of daylight to the time of year. [Clarification Statement: Emphasis is on relative comparisons of the amount of daylight in the winter to the amount in the spring or fall.]	SE/TE: 268-269, Seasons TE Only: 256, CCC Patterns 268, 21 st Century Learning 269, Content Refresher
Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. [Clarification Statement: Examples of patterns could include the position and motion of Earth with respect to the sun and selected stars that are visible only in particular months.]	SE/TE: 272, Lightning Lab TE Only: 281, Science Notebook 313d, Performance Expectation Activity

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 5	Interactive Science ©2016 Grade 5
ESS2 - Earth's Systems	
A Earth Materials and Systems	
<p>Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact. [Clarification Statement: Examples could include the influence of the ocean on ecosystems, landform shape, and climate; the influence of the atmosphere on landforms and ecosystems through weather and climate; and the influence of mountain ranges on winds and clouds in the atmosphere. The geosphere, hydrosphere, atmosphere, and biosphere are each a system.]</p>	<p>SE/TE: 206-207, The Water Cycle 210-215, Lesson 2 221, Water in the Atmosphere 224-229, Lesson 4 313, Landforms and Weather</p> <p>TE Only: 196, CCC Systems and System Models 206, Science Notebook 207, Differential Instruction 209, Content Refresher 210, Explain 215b, Lesson 2 Check _ Questions 5, 6 234, Content Refresher 313a, Performance Expectation Activity 313a, ELA/Literacy 313a, Mathematics</p>
C The Role of Water in Earth's Surface Processes	
<p>Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.</p>	<p>SE/TE: 213, Hydrosphere</p> <p>TE Only: 213, Differentiated Instruction 313b, Performance Expectation Activity 313b, ELA/Literacy</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 5	Interactive Science ©2016 Grade 5
ESS3 - Earth and Human Activity	
C Human Impacts on Earth's Systems	
Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.	<p>SE/TE: 169, Changes Caused by Humans 174-177, Lesson 4 187, Chapter Review – Lesson 4 189, Create a Compost Pile 195, Local Resources 200-203, STEM Activity</p> <p>TE Only: 142D, Teacher Background 142G-142H, Leveled Content Reader Support 173a, My Planet Diary 177a, Explore It! 177b, Lesson 4 Check – Questions 5, 6 195d, Performance Expectation Activity 195d, ELA/Literacy 215, 21st Century Learning</p>
ETS1 - Engineering Design	
A Defining and Delimiting Engineering Problems	
Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.	<p>SE/TE: 4-6, STEM Activity 56-58, STEM Activity 98, Build a Simple Machine 104-105, STEM Activity 146-147, STEM Activity 200-201, STEM Activity 260-262, STEM Activity 318-319, STEM Activity 364-365, STEM Activity 383, Go Green 381-385, Design Process 398-402, Design It!</p> <p>TE Only: 382, Science Notebook</p>

**A Correlation of interactive Science ©2016 to the
Missouri Learning Standards Grade Level Expectations for K-5 Science**

Missouri Learning Standards Grade-Level Expectations for Grade 5	Interactive Science ©2016 Grade 5
B Developing Possible Solutions	
Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	<p>SE/TE: 5-6, Develop Possible Solutions/Choose One Solution</p> <p>In the Post-Activity Discussion for each chapter's STEM Activity, students compare the solutions they have generated and present those which most successfully met the problem criteria and constraints. For representative pages, please see:</p> <p>TE Only: 6, Post-Activity Discussion 106, Post-Activity Discussion 202, Post-Activity Discussion 320, Post-Activity Discussion 366, Post-Activity Discussion</p>
C Optimizing the Solution Process	
Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	<p>SE/TE: 6-7, STEM Activity 59, STEM Activity 106-107, STEM Activity 148-149, STEM Activity 202-203, STEM Activity 262-233, STEM Activity 320-321, STEM Activity 362, Try It! 366-367, STEM Activity 402-403, Test the Prototype/Evaluate and Redesign</p>