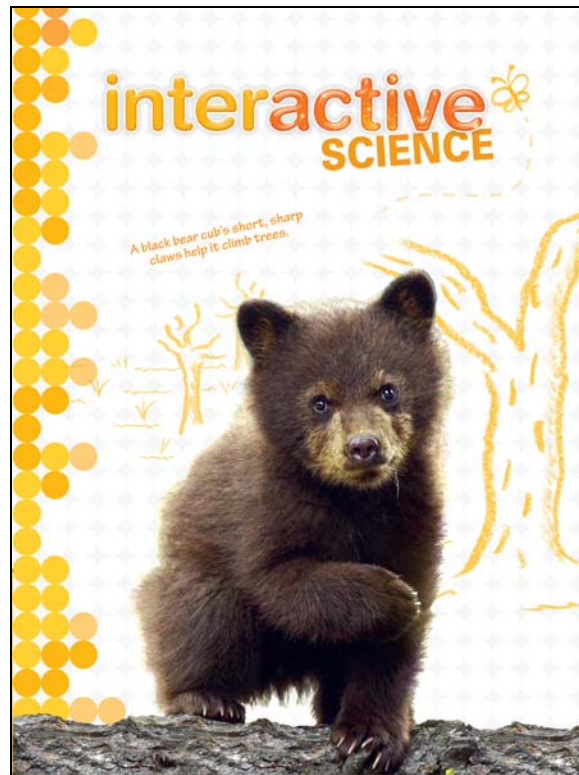


A Correlation of  
**Interactive Science**  
Grade 1, ©2016



To the

**2018 Mississippi  
College-and-Career Readiness  
Standards for Science**



# **A Correlation of Interactive Science ©2016, Grade 1 to the 2018 Mississippi College-and-Career Readiness Standards for Science**

## **Introduction**

The following document demonstrates how the ***Interactive Science, ©2016*** program aligns to the 2018 Mississippi College-and-Career Standards for Science, grades K-5. 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 editions of ***Interactive Science*** were developed to support the Next Generation Science Standards (NGSS) for Grades K-5 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, Grade 1 to the  
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2018 Mississippi College-and-Career Readiness Standards for Science	Interactive Science ©2016 Grade 1
<b>GRADE ONE: Life Science</b>	
<b>1.1 Hierarchical Organization</b>	
<b>Conceptual Understanding:</b> All living things reproduce, grow, develop, respond to stimuli, and die. Living things require air, food, water, and an environment in which to live. Plants are living things, and each plant part (roots, stem, leaves, and fruit) helps them survive, grow, and reproduce.	
<b>1.1 Students will demonstrate an understanding of the basic needs and structures of plants.</b>	
<b>1.1.1</b> <i>Construct explanations using first-hand observations or other media to describe the structures of different plants (i.e., root, stem, leaves, flowers, and fruit). Report findings using drawings, writing, or models.</i>	<b>SE/TE:</b> 46 Inquiry Try It How are flowers alike and different? 60 Plants With Flowers 61 Plants Without Flowers 65 Parts of Plants 66 Roots, Stems and Leaves 67 Flowers and Fruit 89-90 Vocabulary Smart  <b>TE Only:</b> 44C Health 60 21 <sup>st</sup> Century Learning 66 Elaborate Science Notebook 67b Apply Concepts
<b>1.1.2</b> <i>Obtain information from informational text and other media to describe the function of each plant part (roots absorb water and anchor the plant, leaves make food, the stem transports water and food, petals attract pollinators, flowers produce seeds, and seeds produce new plants).</i>	<b>SE/TE:</b> 66 Roots, Stems, and Leaves 67 Flowers and Fruit  <b>TE Only:</b> 66 Elaborate Science Notebook
<b>1.1.3</b> <i>Design and conduct an experiment that shows the absorption of water and how it is transported through the plant. Report observations using drawings, sketches, or models.</i>	<b>Grade 3 SE/TE:</b> 140-141 Inquiry Investigate I How does water move through celery?  <b>Grade 3 TE Only:</b> 141a-d Inquiry Investigate I How does water move through celery?

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<b>1.1.4</b> Create a model which explains the function of each plant structure (roots, stem, leaves, petals, flowers, seeds).	<b>TE Only:</b> 66 Elaborate Science Notebook 66 Differentiated Instruction
<b>1.1.5</b> With teacher support, gain an understanding that scientists are humans who use observations and experiments to learn about the natural world. Obtain information from informational text or other media about scientists who have made important observations about plants (e.g., Theophrastus, Gregor Mendel, George Washington Carver, Katherine Esau).	<b>SE/TE:</b> 130 Meteorologist 154 My Planet Diary George Washington Carver 158-161 What skills do scientists use? 168-171 How do scientists find answers?  <b>TE Only:</b> 154 21 <sup>st</sup> Century Learning 157a My Planet Diary George Washington Carver 161a Inquiry How can you observe objects? 171a Inquiry Explore It How do scientists answer questions?
<b>1.2 Reproduction and Heredity</b>	
<b>Conceptual Understanding:</b> Plants and animals change with each stage of life. Plants have predictable and observable characteristics at each developmental stage (germination, growth, reproduction, and seed dispersal). Most plants are stationary so they depend upon animals or the wind for seed dispersal. Plants and animals are similar to their parents and resemble other plants and animals of the same kind.	
<b>1.2 Students will demonstrate an understanding of how living things change in form as they go through the general stages of a life cycle.</b>	
<b>1.2.1</b> Investigate, using observations and measurements, flowering plants (pumpkins, peas, marigolds, or sunflowers) as they change during the life cycle (i.e., germination, growth, reproduction, and seed dispersal). Use drawings, writing, or models to communicate findings.	<b>SE/TE:</b> 67 Lightning Lab Grow a Plant 68 Inquiry Explore It How does a seed grow? 69 Seeds to Trees 70-71 Life Cycle of a Plant 86-87 Inquiry Investigate It, How do different seeds grow??  <b>TE Only:</b> 71a Inquiry Explore It How does a seed grow? 71b Explain 87a-d Inquiry Activity Card Support

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<b>1.2.2</b> <i>Obtain, evaluate, and communicate information through labeled drawings, the life cycle (egg, larva, pupa, adult) of pollinating insects (e.g., bees, butterflies).</i>	<b>SE/TE:</b> 77 At Home Lab Life Cycle  <b>TE Only:</b> 76 Content Refresher 77 At Home Lab Life Cycle
<b>1.2.3</b> <i>Create a device to help humans disperse seeds in order to grow new plants. Use an engineering design process to define the problem, design, construct, evaluate, and improve a device.*</i>	<b>SE/TE:</b> 208-213, Skills Handbook, What is the design process? guides students through the design process.
<b>1.3 Ecology and Interdependence</b>	
<b>Conceptual Understanding:</b> The needs of plants must be met to survive. Sunlight, water, nutrients, and space to grow are necessary for plant growth and repair.	
<b>1.3A Students will demonstrate an understanding of what plants need from the environment for growth and repair.</b>	
<b>1.3A.1</b> <i>Conduct structured investigations to make and test predictions about what plants need to live, grow, and repair including water, nutrients, sunlight, and space. Develop explanations, compare results, and report findings.</i>	<b>SE/TE:</b> 48 Mix It Up 67 Lightning Lab Grow a Plant 116 Why We Need the Sun  <b>TE Only:</b> 67 Lightning Lab Grow a Plant 68 Lab Support  <b>Grade 2</b> xx Quest Describe a Habitat
<b>Conceptual Understanding:</b> Animals, such as insects, depend on other living organisms for food. Many plants depend on insects or other animals for pollination or to move their seeds around so the plant can survive.	
<b>1.3B Students will demonstrate an understanding of the interdependence of flowering plants and pollinating insects.</b>	
<b>1.3B.1</b> <i>Identify the body parts of a pollinating insect (e.g., bee, butterfly) and describe how insects use these parts to gather nectar or disburse pollen. Report findings using drawings, writing, or models.</i>	<b>Grade 2 SE/TE:</b> 79 Plant Parts  <b>Grade 3 SE/TE:</b> 130 Parts of a Flower  <b>Grade 1 TE Only:</b> 63 Content Refresher

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<b>1.3B.2</b> <i>Create a hand pollinator that will disperse pollen to help seeds grow when natural forms of pollination are unavailable. Use an engineering design process to define the problem, design, construct, evaluate, and improve the hand pollinator.*</i>	<b>SE/TE:</b> 208-213, Skills Handbook, What is the design process? guides students through the design process.
<b>1.4 Adaptations and Diversity</b>	
<b>Conceptual Understanding:</b> Plants respond to stimuli (e.g., turn their leaves to the <i>sun</i> , use tendrils to grab and support) to adapt to changes in the environment. There are distinct environments in the world that support certain types of plants. Plants have features that help them survive in their environment.	
<b>1.4 Students will demonstrate an understanding of the ways plants adapt to their environment in order to survive.</b>	
<b>1.4.1</b> <i>Explore the cause and effect relationship between plant adaptations and environmental changes (i.e., leaves turning toward the sun, leaves changing color, leaves wilting, or trees shedding leaves).</i>	<b>Grade 1 SE/TE:</b> 126 Summer and Fall  See also <b>Grade 3 SE/TE</b> 221 Seasonal Change
<b>1.4.2</b> <i>Describe how the different characteristics of plants help them to survive in distinct environments (e.g., rain forest, desert, grasslands, forests).</i>	<b>SE/TE:</b> 64 My Planet Diary  <b>TE Only:</b> 64 Content Refresher
<b>1.4.3</b> <i>Create a trellis that will make use of plant structures (e.g., tendrils) to support vertical growth and solve the problem of plant overcrowding in a garden. Use an engineering design process to define the problem, design, construct, evaluate, and improve the structure.*</i>	<b>SE/TE:</b> 208-213, Skills Handbook, What is the design process? guides students through the design process.  See also <b>Gr 3 SE/TE:</b> 104-107 STEM Activity Watch It Grow

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<b>GRADE ONE: Physical Science</b>	
<b>11.6 Motions, Forces, and Energy</b>	
<b>Conceptual Understanding:</b> Some objects allow light to pass through them and some objects do not allow any light to pass through them, creating shadows. Very hot objects give off light. Objects reflect light, and objects can only be seen when light is reflected <i>off</i> them. Mirrors and prisms can be used to change the direction of a light beam-	
<b>1.6A Students will demonstrate an understanding that light is required to make objects visible.</b>	
<i>1.6A.1 Construct explanations using first-hand observations or other media to describe how reflected light makes an object visible.</i>	<b>Gr 3 SE/TE:</b> 60
<i>1.6A.2 Use evidence from observations to explain how shadows form and change with the position of the light source.</i>	<b>Grade 1 SE/TE:</b> 26 Light Shines Through  <b>Grade 3 SE/TE</b> 64-65 Shadows  <b>Grade 3 TE Only:</b> 65b Apply Concepts
<b>Conceptual Understanding:</b> Vibrations of matter can create sound, and sound can make an object vibrate. Humans use sound and light to communicate over long distances.	
<b>1.6B Students will demonstrate an understanding of sound.</b>	
<i>1.6B.1 Conduct an investigation to provide evidence that vibrations create sound (e.g., pluck a guitar string) and that sound can create vibrations (e.g., feeling sound through a speaker).</i>	<b>SE/TE:</b> 28 Inquiry Explore It How can you make sound? 29 Sounds  <b>TE Only:</b> 31a Inquiry Explore It How can you make sound? 31b Apply Concepts
<i>1.6B.2 Create a device that uses light and/or sound to communicate over a distance (e.g., signal/amp with a flashlight). Use an engineering design process to define the problem, design, construct, evaluate, and improve the device.*</i>	<b>SE/TE:</b> 6-15 STEM Activity Let's Talk!

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<b>GRADE ONE: Earth and Space Science</b>	
<b>1.9 Earth's Systems and Cycles</b>	
<b>Conceptual Understanding:</b> Weather is a combination of temperature, sunlight, wind, snow, or rain in a particular place at a particular time. People measure weather conditions (temperature, precipitation) to describe and record the weather and to notice patterns over time. Temperature and precipitation can change with the seasons. Some kinds of severe weather (hurricane, tornado, flood, and drought) are more likely to occur in certain regions. Meteorologists forecast severe weather so that communities can prepare for and respond appropriately.	
<b>1.9A Students will demonstrate an understanding of the patterns of weather by describing, recording, and analyzing weather data to answer questions about daily and seasonal weather patterns.</b>	
<p><i>1.9A.1 Analyze and interpret data from observations and measurements to describe local weather conditions (including temperature, wind, and forms of precipitation).</i></p>	<p><b>Grade K SE/TE</b> 42, Inquiry How does weather change? 42, Activity 43, Let's Read Science 43 Activity</p> <p><b>Grade K TE Only:</b> 80 Try It 8121<sup>st</sup> Century Learning</p> <p><b>Grade 3 SE/TE:</b> 258 Inquiry Explore It What is the daily temperature? 266 Inquiry Explore It How does an anemometer work? 267 Why We Measure Weather 268 Tools for Measuring Weather 268 Lightning Lab 269 Air Pressure 289 Measure Rainfall</p> <p><b>Grade 3 TE Only:</b> 246E Lightning Lab Measure and Record Temperatures 265a Inquiry Explore It What is the daily temperature? 266 Lab Support 269a Inquiry Explore It How does an anemometer work?</p>



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<i>1.9A.2 Develop and use models to predict weather conditions associated with seasonal patterns and changes.</i>	<p><b>Grade 3 SE/TE:</b> 264 Seasonal Weather Patterns 264 Do the math! Interpret a Graph</p> <p><b>Grade 3 TE Only:</b> 265a Inquiry Explore It What is the daily temperature?</p>
<i>1.9A.3 Construct an explanation for the general pattern of change in daily temperatures by measuring and calculating the difference between morning and afternoon temperatures.</i>	<p><b>Gr 3 SE/TE:</b> 258 Explore It What is the daily temperature?</p> <p>Gr 3 TE Only 265a Explore It What is the daily temperature?</p>
<i>1.9A.4 Obtain and communicate information about severe weather conditions to explain why certain safety precautions are necessary.</i>	<p><b>Gr 3 SE/TE:</b> 271 Thunderstorms 272-273 Tornadoes 273 At Home Lab Safe Places 274-275 Hurricanes 275 Hurricane Safety</p> <p><b>Gr 3 TE Only:</b> 272 Common Misconception 273 Content Refresher 275 21<sup>st</sup> Century Learning Severe Weather Safety Posters 275b Apply Concepts</p>

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2018 Mississippi College-and-Career Readiness Standards for Science**

<b>2018 Mississippi College-and-Career Readiness Standards for Science</b>	<b>Interactive Science ©2016 Grade 1</b>
<p><b>Conceptual Understanding:</b> The Earth is made of different materials, including rocks, soil, and water (nonliving things). Plants and animals, including humans, depend on the Earth's land, water, and air to live and grow. Animals, including humans, can change the environment (e.g., shape of the land, the flow of water).</p>	
<p><b>1.9B Students will demonstrate an understanding of models (drawings or maps) to describe how water and land are distributed on Earth.</b></p>	
<p><i>1.9B.1 Locate, classify, and describe bodies of water (oceans, rivers, lakes, and ponds) on the Earth's surface using maps, globes, or other media.</i></p>	<p><b>Gr 2 SE/TE:</b> 133 Land and Water 136 The Ocean, Lakes and Ponds 137 Rivers and Streams 159 Make a Puzzle</p> <p><b>Gr 2 TE Only:</b> 137b Apply Concepts 159c Performance Expectation Activity 159d Performance Expectation Activity</p>
<p><i>1.9B.2 Generate and answer questions to explain the patterns and location of frozen and liquid bodies of water on earth using maps, globes, or other media.</i></p>	<p><b>Gr 2 SE/TE:</b> 133 Land and Water 136 Lakes and Ponds 137 Rivers and Streams 137 Glaciers</p> <p><b>Gr 2 TE Only:</b> 137b Words to Know 159d Performance Expectation Activity 142 Content Refresher</p>
<p><i>1.9B.3 With teacher guidance, plan and conduct a structured investigation to determine how the movement of water can change the shape of the land on earth.</i></p>	<p><b>Gr 2 SE/TE:</b> 141 Weathering and Erosion 141 Lightning Lab 142 Water Changes the Land 148-149 Investigate It How can rocks crack?</p> <p><b>Gr 2 TE Only:</b> 143b Explain 143b Apply Concepts 149a-d Investigate It How can rocks crack? Activity Card Support</p>

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<b>1.10 Earth's Resources</b>	
<b>Conceptual Understanding:</b> Water is essential to life on earth. Humans and other living things are dependent on clean water to survive. Water is an Earth material, and like all of Earth's resources, the amount of water is limited. Continued health and survival of humans are dependent on solutions that maintain clean water sources.	
<b>1.10 Students will demonstrate an understanding of human dependence on clean and renewable water resources.</b>	
<b>1.10.1</b> <i>Obtain and evaluate informational texts and other media to generate and answer questions about water sources and human uses of clean water.</i>	<b>Gr K SE/TE</b> 58  <b>Gr K TE Only:</b> 94 Explore 95 Elaborate  <b>Gr 2 SE/TE:</b> 136 Lakes and Ponds
<b>1.10.2</b> <i>Communicate solutions that will reduce the impact of humans on the use and quality of water in the local environment.</i>	<b>Gr 3 SE/TE</b> 220 Go Green Conserve Water  <b>Gr 3 TE Only:</b> 220 Go Green Conserve Water
<b>1.10.3</b> <i>Create a tool that will collect free water to meet a human need (e.g., household drinking water, watering plants/animals, cleaning). Use an engineering design process to define the problem, design, construct, evaluate, and improve the structure.*</i>	<b>Gr 3 SE/TE</b> 250-253 Inquiry STEM Activity Runaway Water!  <b>Gr 5 SE/TE:</b> 146-149 Inquiry STEM Activity Let It Self-Water