



Mystery Science Alignment with the

Mississippi College and Career Readiness Standards for Science (2018)

Mystery Science - Mississippi Alignment

Mystery Science aligns to the Mississippi College and Career Readiness Standards for Science (2018). Each lesson (exploration & activity) is designed to take one hour per week. To view each lesson's alignment to three-dimensional learning (disciplinary core ideas, science and engineering practices, and crosscutting concepts) view our <u>NGSS Alignment</u> document. Mini-lessons are 5-minute videos that answer K-5 student questions and can be used as a jumping off point to engage learners for a full lesson planned by the teacher.

Lesson Extensions. Extensions are available for each lesson and offer an opportunity for students to continue their science content learning. They include assessments and a curated collection of additional activity suggestions, online resources, project ideas, and readings to help extend the learning.

Table of Contents				
Kindergarten	Life Science	Earth & Space Science	Physical Science	
Grade 1	Life Science	Earth & Space Science	Physical Science	
Grade 2	Life Science	Earth & Space Science	Physical Science	
Grade 3	Life Science	Earth & Space Science	Physical Science	
Grade 4	Life Science	Earth & Space Science	Physical Science	
Grade 5	Life Science	Earth & Space Science	Physical Science	





Kindergarten

Mystery Science aligns to the Mississippi College and Career Readiness Standards for Science (2018). Each lesson (exploration & activity) is designed to take one hour per week. Extensions can expand upon each lesson. To view each lesson's alignment to three-dimensional learning (disciplinary core ideas, science and engineering practices, and crosscutting concepts) view our <u>NGSS Alignment</u> document. Mini-lessons are 5-minute videos that answer K-5 student questions and can be used as a jumping off point to engage learners for a full lesson planned by the teacher.

Strand	Торіс	Mississippi CCRS for Science (2018)	Mystery Science Unit	Mystery Science Lessons
	Hierarchical	L.K.1A Students will demonstrate an understanding of living and nonliving things.		
	Organization	L.K.1B Students will demonstrate an understanding of how animals (including humans) use their physical features and their senses to learn about their environment.	Plant & Animal Superpowers	Lesson 1: Why do birds have beaks? Lesson 2, Read-Along: Why do baby ducks follow their mother?
Life Science	Reproduction & Heredity	L.K.2 Students will demonstrate an understanding of how living things change in form as they go through the general stages of a life cycle.	<u>Mini-lessons</u> <u>Plant & Animal</u> <u>Secrets</u>	Mini-lesson: Why do leaves change color in the fall?* Mini-Lesson: Where do bugs go in winter? Lesson 5: How do plants and trees grow?
			Plant & Animal Superpowers	Lesson 4, Read-Along: Why do family members look alike?

* <u>Plant & Animal Secrets</u> was designed for Kindergarten NGSS and <u>Plant & Animal Superpowers</u> was designed for Grade 1 NGSS. We suggest starting with Plant & Animal Secrets and building on that foundational knowledge with lessons in Plant & Animal Superpowers..

*Indicates a mini-lesson that includes a hands-on STEAM activity from Mystery Science





Kindergarten, continued

Mystery Science aligns to the Mississippi College and Career Readiness Standards for Science (2018). Each lesson (exploration & activity) is designed to take one hour per week. Extensions can expand upon each lesson. To view each lesson's alignment to three-dimensional learning (disciplinary core ideas, science and engineering practices, and crosscutting concepts) view our <u>NGSS Alignment</u> document. Mini-lessons are 5-minute videos that answer K-5 student questions and can be used as a jumping off point to engage learners for a full lesson planned by the teacher.

Strand	Торіс	Mississippi CCRS for Science (2018)	Mystery Science Unit	Mystery Science Lessons
		L.K.3A Students will demonstrate an understanding of what animals and plants need to live and grow.	<u>Plant &</u> <u>Animal</u> <u>Secrets</u>	 Lesson 1: Why do woodpeckers peck wood? Lesson 2, Read-Along: Where do animals live? Lesson 3: How can you find animals in the woods? Lesson 4, Read-Along: How do animals make their homes in the forest? Lesson 5: How do plants and trees grow? Lesson 6, Read-Along: Why would you want an old log in your backyard?
	Ecology & Interdependen		Mini-lessons	Mini-lesson: Why can't fish breathe on land?
Life Science	ce	L.K.3B Students will demonstrate an understanding of the interdependence of living things and the	<u>Plant &</u> <u>Animal</u> <u>Secrets</u>	Lesson 4, Read-Along: How do animals make their homes in the forest? Lesson 6, Read-Along: Why would you want an old log in your backyard?
		environment in which they live.	<u>Plant &</u> Animal	
			Superpowers	Lesson 3: Why are polar bears white?
	Adaptations & Diversity	L.K.4 Students will demonstrate an understanding that some groups of plants and animals are no longer living (extinct) because they were unable to meet their needs for survival.		

* <u>Plant & Animal Secrets</u> was designed for Kindergarten NGSS and <u>Plant & Animal Superpowers</u> was designed for Grade 1 NGSS. We suggest starting with Plant & Animal Secrets and building on that foundational knowledge with lessons in Plant & Animal Superpowers.





Kindergarten, continued

Strand	Торіс	Mississippi CCRS for Science (2018)	Mystery Science Unit	Mystery Science Lessons
		E.K.8A Students will demonstrate an understanding of	<u>Weather</u> <u>Watching</u>	Lesson 3: What will the weather be like on your birthday? Lesson 4, Read-along: How do you know what to wear for the weather?
Earth & Space Science	Earth & the Universe	the pattern of seasonal changes on the Earth.	Mini-lessons	Mini-lesson: Why is snow white?* Mini-lesson: Why do leaves change color in the fall?* Mini-lesson: Why does it get cold in winter? Mini-lesson: Where do bugs go in winter?
		E.K.8B Students will demonstrate an understanding that the Sun provides the Earth with heat and light.	Weather	Lesson 5: How could you warm up a frozen playground?
	Earth's Resources	E.K.10 Students will demonstrate an understanding of how humans use Earth's resources.	<u>Watching</u>	Lesson 6, Read-along: How could you walk barefoot across hot pavement without burning your feet?
Physical Science	Organization of Matter and Chemical Interactions	P.K.5A Students will demonstrate an understanding of the solid and liquid states of matter.		
		P.K.5B Students will demonstrate an understanding of how solid objects can be constructed from a smaller set.		





Mystery Science aligns to the Mississippi College and Career Readiness Standards for Science (2018). Each lesson (exploration & activity) is designed to take one hour per week. Extensions can expand upon each lesson. To view each lesson's alignment to three-dimensional learning (disciplinary core ideas, science and engineering practices, and crosscutting concepts) view our <u>NGSS Alignment</u> document. Mini-lessons are 5-minute videos that answer K-5 student questions and can be used as a jumping off point to engage learners for a full lesson planned by the teacher.

Strand	Торіс	Mississippi CCRS for Science (2018)	Mystery Science Unit	Mystery Science Lessons
	Hierarchical Organization	L.1.1 Students will demonstrate an understanding of the basic needs and structures of plants.	Plant & Animal Superpowers	Lesson 5: Why don't trees blow down in the wind? Lesson 6, Read-along: What do sunflowers do when you're not looking?
	Reproduction & Heredity	L.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.		
	- / -		<u>Plant</u> <u>Adventures</u>	Lesson 4: Should you water a cactus? Lesson 5: Where do plants grow best?
l ife	Ecology & Inter- dependence		Mini-lessons	Mini-lesson: How do flowers bloom in the spring?*
Life Science		L.1.3B Students will demonstrate an understanding of the interdependence of flowering plants and pollinating insects.	Mini-lessons	Mini-lesson: How do bees make honey?
			<u>Plant & Animal</u> Superpowers	Lesson 5: Why don't trees blow down in the wind? Lesson 6, Read-along: What do sunflowers do when you're not looking?
	Adaptations & Diversity	L.1.4 Students will demonstrate an understanding of the ways plants adapt to their environment in order to survive.	<u>Plant</u> Adventures	Lesson 1: How did a tree travel halfway around the world? Lesson 2: Could a plant survive without light? Lesson 3: Why do trees grow so tall? Lesson 4: Should you water a cactus? Lesson 5: Where do plants grow best?

*Indicates a mini-lesson that includes a hands-on STEAM activity from Mystery Science





Grade 1, continued

Strand	Торіс	Mississippi CCRS for Science (2018)	Mystery Science Unit	Mystery Science Lessons
	Earth's	E.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.	<u>Weather</u> Watching	Lesson 1: Have you ever watched a storm? Lesson 2, Read-along: How can you get ready for a big storm?
Earth & Space Science	Systems and Cycles	E.1.9B Students will demonstrate an understanding of models (drawings or maps) to describe how water and land are distributed on Earth.	<u>Work of</u> <u>Water</u>	 Lesson 1: If you floated down a river, where would you end up? Lesson 2: Why is there sand at the beach? Lesson 3: What's strong enough to make a canyon? Lesson 4: How can you stop a landslide?
	Earth's Resources	E.1.10 Students will demonstrate an understanding of human dependence on clean and renewable water resources.		
Physical Science	Motions, Forces, & Energy	P.1.6A Students will demonstrate an understanding that light is required to make objects visible.		Lesson 1: How do they make silly sounds in cartoons? Lesson 2, Read-along: Where do sounds come from? Lesson 3: What if there were no windows?
		P.1.6B Students will demonstrate an understanding of sound.	<u>Lights &</u> <u>Sounds</u>	Lesson 4, Read-along: Can you see in the dark? Lesson 5: How could you send a secret message to someone far away? Lesson 6, Read-along: How do boats find their way in the fog?





Strand	Торіс	Mississippi CCRS for Science (2018)	Mystery Science Unit	Mystery Science Lessons
	Hierarchical Organization	L.2.1 Students will demonstrate an understanding of the classification of animals based on physical characteristics.	<u>Animal</u> <u>Adventures</u> <u>Mini-lessons</u>	 Lesson 1: How many different kinds of animals are there? Lesson 2: Why do frogs say "ribbit"? Lesson 3: How could you get more birds to visit a feeder? Mini-lesson: What is the biggest spider in the world?*
Life	Reproduction & Heredity	L.2.2 Students will demonstrate an understanding of how living things change in form as they go through the general stages of a life cycle.		
Science	Ecology & Inter-	L.2.3A Students will demonstrate an understanding of the interdependence of living things and the environment in which they live.	<u>Animal</u> Adventures	Lesson 2: Why do frogs say "ribbit"?
	dependence	L.2.3B Students will demonstrate an understanding of the interdependence of living things.	Mini-lessons	Mini-lesson: Why do bears hibernate?*
	Adaptations & Diversity	L.2.4 Students will demonstrate an understanding of the ways animals adapt to their environment in order to survive.	Mini-lessons	Mini-lesson: Why are butterflies so colorful?* Mini-lesson: Why do bears hibernate?*







Grade 2, continued

Mystery Science aligns to the Mississippi College and Career Readiness Standards for Science (2018). Each lesson (exploration & activity) is designed to take one hour per week. Extensions can expand upon each lesson. To view each lesson's alignment to three-dimensional learning (disciplinary core ideas, science and engineering practices, and crosscutting concepts) view our <u>NGSS Alignment</u> document. Mini-lessons are 5-minute videos that answer K-5 student questions and can be used as a jumping off point to engage learners for a full lesson planned by the teacher.

Strand	Торіс	Mississippi CCRS for Science (2018)	Mystery Science Unit	Mystery Science Lessons
Earth & Space Science	Earth & the Universe	E.2.8 Students will demonstrate an understanding of the appearance, movements, and patterns of the sun, moon, and stars.	<u>Spinning Sky</u>	 Lesson 1: Could a statue's shadow move? Lesson 2, Read-along: What does your shadow do when you're not looking? Lesson 3: How can the Sun help you if you're lost? Lesson 4, Read-along: Why do you have to go to bed early in the summer? Lesson 5: Why do the stars come out at night? Lesson 6, Read-along: How can stars help you if you get lost?
	Earth's Resources	E.2.10 Students will demonstrate an understanding of how humans use Earth's resources.		
	Organization of Matter & Chemical Interactions	P.2.5 Students will demonstrate an understanding of the properties of matter.	<u>Material</u> <u>Magic</u>	 Lesson 1: Why do we wear clothes? Lesson 2: Can you really fry an egg on a hot sidewalk? Lesson 3: Why are so many toys made out of plastic? Lesson 4: What materials might be invented in the future? Lesson 5: Could you build a house out of paper?
Physical Science	Motions, Forces, & Energy	P.2.6 Students will demonstrate an understanding of how the motion of objects is affected by pushes, pulls, and friction on an object.	Force Olympics*	Lesson 1: What's the biggest excavator? Lesson 2, Read along: Why do builders need so many big machines? Lesson 3: How can you knock down a wall made of concrete? Lesson 4, Read along: How can you knock down the most bowling pins? Lesson 5: How can we protect a mountain town from falling rocks? Lesson 6, Read along: How could you invent a trap?
			<u>Invisible</u> <u>Forces</u>	Lesson 1: How could you win a tug-of-war against a bunch of adults? Lesson 2: What makes bridges so strong? Lesson 3: How can you go faster down a slide?

* Force Olympics was designed for Kindergarten NGSS, but can be taught in Grade 2 with modifications. Expect elements of this unit to be intended for a younger audience.





Strand	Торіс	Mississippi CCRS for Science (2018)	Mystery Science Unit	Mystery Science Lessons
	Hierarchical Organization	L.3.1 Students will demonstrate an understanding of internal and external structures in plants and animals and how they relate to their growth, survival, behavior, and reproduction within an environment.	<u>Animals</u> <u>Through Time</u>	Lesson 4: What kinds of animals might there be in the future? Lesson 5: Can selection happen without people? Lesson 6: Why do dogs wag their tails?
Life Science	Reproduction & Heredity	L.3.2 Students will demonstrate an understanding that through reproduction, the survival and physical features of plants and animals are inherited traits from parent organisms but can also be influenced by the environment.	<u>Power of</u> <u>Flowers</u>	Lesson 1: Why do plants grow flowers? Lesson 2: Why do plants give us fruit? Lesson 3: Why are some apples red and some green? Lesson 4: How could you make the biggest fruit in the world?
	Adaptations & Diversity	L.3.4 Students will demonstrate an understanding of how adaptations allow animals to satisfy life needs and respond both physically and behaviorally to their environment.	<u>Animals</u> <u>Through Time</u>	Lesson 4: What kinds of animals might there be in the future? Lesson 5: Can selection happen without people? Lesson 6: Why do dogs wag their tails? Lesson 7: What's the best way to get rid of mosquitoes? Lesson 8: How long can people (and animals) survive in outer space?





Grade 3, continued

Strand	Торіс	Mississippi CCRS for Science (2018)	Mystery Science Unit	Mystery Science Lessons
		E.3.7A Students will demonstrate an understanding of the various processes involved in the rock cycle,	<u>The Birth of</u> <u>Rocks</u>	Lesson 1: Could a volcano pop up where you live? Lesson 2: Why do some volcanoes explode? Lesson 3: Will a mountain last forever? Lesson 4: How could you survive a landslide?
Earth &	Earth's Structure & History	superposition of rock layers, and fossil formation.	<u>Animals</u> <u>Through Time</u>	Lesson 1: Where can you find whales in the desert? Lesson 2: How do we know what dinosaurs looked like? Lesson 3: Can you outrun a dinosaur?
Space Science		E.3.7B Students will demonstrate an understanding of the composition of Earth and the processes which change Earth's landforms.	<u>The Birth of</u> <u>Rocks</u>	Lesson 1: Could a volcano pop up where you live? Lesson 2: Why do some volcanoes explode? Lesson 3: Will a mountain last forever? Lesson 4: How could you survive a landslide?
	Earth's Systems & Cycles	E.3.9 Students will demonstrate an understanding of how the Earth's systems (i.e., geosphere, hydrosphere, atmosphere, and biosphere) interact in multiple ways to affect Earth's surface materials and processes.		
	Earth's Resources	E.3.10 Students will demonstrate an understanding that all materials, energy, and fuels that humans use are derived from natural sources.		
Physical	Organization of Matter & Chemical Interactions	P.3.5 Students will demonstrate an understanding of the physical properties of matter to explain why matter can change states between a solid, liquid, or gas dependent upon the addition of removal of heat.	<u>Mini-lessons</u>	Mini-lesson: Can you make lava?
Science	Motions, Forces, & Energy	P.3.6 Students will demonstrate an understanding of magnets and the effects of pushes, pulls, and friction on the motion of objects.	Invisible Forces	Lesson 4: What can magnets do? Lesson 5: How can you unlock a door using a magnet





Mystery Science aligns to the Mississippi College and Career Readiness Standards for Science (2018). Each lesson (exploration & activity) is designed to take one hour per week. Extensions can expand upon each lesson. To view each lesson's alignment to three-dimensional learning (disciplinary core ideas, science and engineering practices, and crosscutting concepts) view our <u>NGSS Alignment</u> document. Mini-lessons are 5-minute videos that answer K-5 student questions and can be used as a jumping off point to engage learners for a full lesson planned by the teacher.

Strand	Торіс	Mississippi CCRS for Science (2018)	Mystery Science Unit	Mystery Science Lessons
Life Science	Hierarchical Organization	L.4.1 Students will demonstrate an understanding of the organization, functions, and interconnections of the major human body systems.	<u>Human</u> <u>Machine</u> <u>Mini-lessons</u>	Lesson 1: Why do biceps bulge? Lesson 2: What do people who are blind see? Lesson 3: How can some animals see in the dark? Lesson 4: How does your brain control your body? Mini-lesson: What would happen if you didn't have a skull?* Mini-lesson: Why do our skeletons have so many bones?* Mini-lesson: Why do es your heart pump blood?* Mini-lesson: Why do we get hiccups? Mini-lesson: Why do we have eyebrows? Mini-lesson: Why do we need blood?
	Reproduction & Heredity	L.4.2 Students will demonstrate an understanding of life cycles, including familiar plants and animals (e.g., reptiles, amphibians, or birds).		
		E.4.9A Students will demonstrate an understanding of how the water cycle is propelled by the sun's energy.	Stormy Skies	Lesson 1: Where do clouds come from?
			Watery Planet	Lesson 3: Can we make it rain?
Earth & Space	Earth's Systems & Cycles	E.4.9B Students will demonstrate an understanding of weather and climate patterns.	Stormy Skies	Lesson 1: Where do clouds come from? Lesson 2: How can we predict when it's going to storm? Lesson 3: Why are some places always hot? Lesson 4: How can you keep a house from blowing away in a windstorm?
Science		E.4.9C Students will demonstrate an understanding of how natural processes and human activities affect the features of Earth's landforms and oceans.	Watery Planet	Lesson 1: How much water is in the world? Lesson 2: When you turn on the faucet, where does the water come from? Lesson 3: Can we make it rain? Lesson 4: How can you save a town from a hurricane?
	Earth's Resources	E.4.10 Students will demonstrate an understanding of the various sources of energy used for human needs along with their effectiveness and possible impacts.	Energizing Everything	Lesson 8: Where does energy come from?



*Indicates a mini-lesson that includes a hands-on STEAM activity from Mystery Science



Grade 4, continued

Strand	Торіс	Mississippi CCRS for Science (2018)	Mystery Science Unit	Mystery Science Lessons
Physical	Motions,	P.4.6A Students will demonstrate an understanding of the common sources and uses of heat and electric energy and the materials used to transfer heat and electricity,	<u>Energizing</u> <u>Everything</u> <u>Mini-lesson</u>	 Lesson 6: What if there were no electricity? Lesson 7: How long did it take to travel across the country before cars and planes? Mini-lesson: How do batteries work?
Science	Forces, & Energy	P.4.6B Students will demonstrate an understanding of the properties of light as forms of energy.	<u>Human</u> <u>Machine</u>	Lesson 2: What do people who are blind see? Lesson 3: How can some animals see in the dark?
		P.4.6C Students will demonstrate an understanding of the properties of sound as a form of energy.	<u>Waves of</u> <u>Sound</u>	Lesson 1: How far can a whisper travel? Lesson 2: What would happen if you screamed in outer space? Lesson 3: Why are some sounds high and some sounds low?





Strand	Торіс	Mississippi CCRS for Science (2018)	Mystery Science Unit	Mystery Science Lessons
Life Science	Ecology & Inter- dependence	L.5.3A Students will demonstrate an understanding of photosynthesis and the transfer of energy from the sun into chemical energy necessary for plant growth and survival.	Web of Life	Lesson 2: What do plants eat? Lesson 6: Why did the dinosaurs go extinct?
		L.5.3B Students will demonstrate an understanding of a healthy ecosystem with a stable web of life and the roles of living things within a food chain and/or food web, including producers, primary and secondary consumers, and decomposers.	Web of Life	 Lesson 1: Why would a hawk move to New York City? Lesson 2: What do plants eat? Lesson 3: Where do fallen leaves go? Lesson 4: Do worms really eat dirt? Lesson 5: Why do you have to clean a fish tank but not a pond? Lesson 6: Why did the dinosaurs go extinct?
Earth & Space Science	Earth & the Universe	E.5.8A Students will demonstrate an understanding of the locations of objects in the universe.	<u>Spaceship</u> <u>Earth</u>	Lesson 1: How fast does the Earth spin? Lesson 2: Who set the first clock? Lesson 3: How can the Sun tell you the season? Lesson 4: Why do the stars change with the seasons? Lesson 5: Why does the Moon change shape? Lesson 6: What are the wandering stars? Lesson 7: Why is gravity different on other planets? Lesson 8: Could there be life on other planets?
		E.5.8B Students will demonstrate an understanding of the principles that govern moon phases, day and night, appearance of objects in the sky, and seasonal changes.		
	Earth's Resources	E.5.10 Students will demonstrate an understanding of the effects of human interaction with Earth and how Earth's natural resources can be protected and conserved.		





Grade 5, continued

Strand	Торіс	Mississippi CCRS for Science (2018)	Mystery Science Unit	Mystery Science Lessons
Physical Science	Organization of Matter & Chemical Interactions	P.5.5A Students will demonstrate an understanding of the physical properties of matter.	<u>Chemical</u> <u>Magic</u>	Lesson 1: Are magic potions real? Lesson 2: Could you transform something worthless into gold? Lesson 3: What would happen if you drank a glass of acid? Lesson 4: What do fireworks, rubber, and Silly Putty have in common? Lesson 5: Why do some things explode?
		P.5.5B Students will demonstrate an understanding of mixtures and solutions.		
		P.5.5C Students will demonstrate an understanding of the difference between physical and chemical changes.		
	Motions, Forces, and Energy	P.5.6 Students will demonstrate an understanding of the factors that affect the motion of an object through a study of Newton's Laws of Motion.	<u>Energizing</u> Everything	 Lesson 1: How is your body similar to a car? Lesson 2: What makes roller coasters go so fast? Lesson 3: Why is the first hill of a roller coaster always the highest? Lesson 4: Could you knock down a building using only dominoes? Lesson 5: Can you build a chain reaction machine?

