

Mystery Science Alignment with the Alabama Course of Study: Science



Mystery Science is a hands-on curriculum that is aligned with the 2023 Alabama Course of Study: Science

Mystery Science's units of study contain:

- Hands-on, easy-prep activities with EVERY lesson
- Engaging, real-world investigative phenomena
- Thoughtful discussions to build background knowledge
- Lesson & unit assessments to evaluate comprehension
- Curated, cross-curricular extensions

Mystery Science also offers the Anchor Layer, which enriches the unit with an anchor phenomenon, incorporates anchor connections after each lesson, & concludes the unit with a performance task.

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All Kindergarten Units • Units may be taught in any order



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Alabama Science Performance Expectations:

- K-LS1-1
- K-ESS2-2
- K-ESS3-1

Unit Breakdown:

- 4 Lessons & Activities
- 4 Lesson Assessments
- 4 Extension Blocks

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 4 Anchor Connections
- 1 Performance Task

Alabama Science Performance Expectations:

- K-LS1-1
- K-ESS3-3

Unit Breakdown:

- 3 Lessons & Activities
- 2 Lesson Assessments
- 3 Extension Blocks

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task

Alabama Science Performance Expectations:

- K-ESS2-1
- K-ESS3-2

Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task

Alabama Science Performance Expectations:

- K-ESS2-1
- K-ESS2-2

Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task

Alabama Science Performance Expectations:

- K-PS3-1
- K-PS3-2
- K-2-ETSI-1
- K-2-ETSI-3

Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task

Alabama Science Performance Expectations:

- K-PS2-1
- K-PS2-2
- K-2-ETSI-1
- K-2-ETSI-2
- K-2-ETSI-3

Unit Breakdown:

- 6 Lessons & Activities
- 6 Lesson Assessments
- 6 Extension Blocks

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 6 Anchor Connections
- 1 Performance Task

Animal Needs (Animal Secrets)




	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 1 	Animal Needs: Food Why do woodpeckers peck wood?	4. Use observations to determine patterns of what plants and animals (including humans) need to survive, including light, water, and nutrients.	Obtaining, Evaluating, and Communicating Information Engaging in Argument from Evidence	LS1.C. Organization for Matter and Energy Flow in Organisms	Patterns
Lesson 2 	Animal Needs: Shelter Where do animals live?	4. Use observations to determine patterns of what plants and animals (including humans) need to survive, including light, water, and nutrients.	Obtaining, Evaluating, and Communicating Information	ESS3.A. Natural Resources	Patterns Systems and System Models
Lesson 3 	Animal Needs: Safety How can you find animals in the woods?	4. Use observations to determine patterns of what plants and animals (including humans) need to survive, including light, water, and nutrients.	Obtaining, Evaluating, and Communicating Information Engage in Argument from Evidence	LS1.C. Organization for Matter and Energy Flow in Organisms	Patterns
Lesson 4 	Animals & Changing the Environment How do animals make their homes in the forest?	5. Gather information from observations and media to explain how plants and animals can provide for their needs by changing their environment.	Obtaining, Evaluating, and Communicating Information	ESS2.E. Biogeology	Systems and System Models

Plant Needs (Plant Secrets)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<p>Lesson 1</p>	<p>Living & Nonliving</p> <p>Are plants alive?</p>	<p>3. Use data from observations to distinguish characteristics of living and nonliving things.</p>	<p>Analyzing and Interpreting Data</p>	<p>LS1.C: Organization for Matter and Energy Flow in Organisms</p>	<p>Patterns</p>
<p>Lesson 2</p>	<p>Plant Needs: Water & Light</p> <p>How do plants and trees grow?</p>	<p>4. Use observations to determine patterns of what plants and animals (including humans) need to survive, including light, water, and nutrients.</p>	<p>Planning and Carrying Out Investigations</p> <p>Analyzing and Interpreting Data</p>	<p>LS1.C: Organization for Matter and Energy Flow in Organisms</p>	<p>Patterns</p> <p>Cause and Effect</p>
<p>Lesson 3</p>	<p>Human Impacts on the Environment</p> <p>Why would you want an old log in your backyard?</p>	<p><i>Foundational for</i> 6. Use models of natural habitats to represent the interdependence among plants and animals native to their community</p>	<p>Obtaining, Evaluating, and Communicating Information</p>	<p>ESS3.C: Human Impacts on Earth Systems</p>	<p>Cause and Effect</p>

Alabama Specific Standard: 11. Identify a problem and design possible solutions that lessen the human impact on the local environment

Severe Weather (Wild Weather)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 1 	Severe Weather & Preparation How can you get ready for a big storm?	10. Obtain, evaluate, and communicate information about using weather forecasts to make plans and prepare for severe weather.	Obtaining, Evaluating, and Communicating Information	ESS3.B: Natural Hazards ESS2.D: Weather and Climate	Cause and Effect
Lesson 2 	Wind & Storms Have you ever watched a storm?	9. Observe, record, and communicate local weather patterns over a period of time. 10. Obtain, evaluate, and communicate information about using weather forecasts to make plans and prepare for severe weather.	Asking Questions and Defining Problems Obtaining, Evaluating, and Communicating Information	ESS3.B: Natural Hazards ESS2.D: Weather and Climate	Cause and Effect
Lesson 3 	Weather Conditions How many different kinds of weather are there?	9. Observe, record, and communicate local weather patterns over a period of time.	Analyzing and Interpreting Data	ESS2.D: Weather and Climate	Patterns


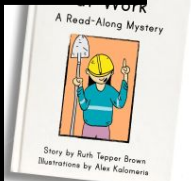


Weather Patterns (Circle of Seasons)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<p>Lesson 1 Detective A Read-Along Mystery Stories by Ruth Pepper Brown Illustrations by Alex Fallmerberg</p>	<p>Daily Weather Patterns</p> <p>How do you know what to wear for the weather?</p>	9. Observe, record, and communicate local weather patterns over a period of time.	<p>Analyzing and Interpreting Data</p> <p>Obtaining, Evaluating, and Communicating Information</p> <p>Asking Questions and Defining Problems</p>	ESS2.D: Weather and Climate	Patterns
<p>Lesson 2</p>	<p>Seasonal Weather Patterns</p> <p>What will the weather be like on your birthday?</p>	9. Observe, record, and communicate local weather patterns over a period of time.	<p>Obtaining, Evaluating, and Communicating Information</p> <p>Engaging in Argument from Evidence</p>	ESS2.D: Weather and Climate	<p>Patterns</p> <p>Systems and System Models</p>
<p>Lesson 3</p>	<p>Animals Changing their Environment</p> <p>Why do birds lay eggs in the spring?</p>	5. Gather information from observations and media to explain how plants and animals can provide for their needs by changing their environment.	Developing and Using Models	<p>ESS2.D: Weather and Climate</p> <p>ESS2.E: Biogeology</p>	Structure and Function



Sunlight & Warmth (Sunny Skies)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 1 	Sunlight, Heat, & Earth's Surface How could you walk barefoot across hot pavement without burning your feet?	7. Make observations and describe the effects of sunlight on Earth's surface.	Asking Questions and Defining Problems Constructing Explanations and Designing Solutions	PS3.B: Conservation of Energy and Energy Transfer ETS1.A: Defining and Delimiting an Engineering Problem	Cause and Effect Structure and Function
Lesson 2 	Sunlight, Warming, & Engineering How could you warm up a frozen playground?	7. Make observations and describe the effects of sunlight on Earth's surface. 8. Design, construct, and test a device to reduce the effects of sunlight.* *Students are focused on increasing the effects of sunlight in this activity.	Asking Questions and Defining Problems Planning and Carrying Out Investigations Constructing Explanations and Designing Solutions	PS3.B: Conservation of Energy and Energy Transfer ETS1.A: Defining and Delimiting an Engineering Problem ETS1.C: Optimizing the Design Solution	Cause and Effect
Lesson 3 	Sunlight & Warmth Why does it get cold in winter?	7. Make observations and describe the effects of sunlight on Earth's surface.	Planning and Carrying Out Investigations	PS3.B: Conservation of Energy and Energy Transfer	Cause and Effect

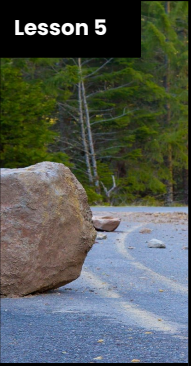


Pushes & Pulls (Force Olympics) • Page 1 of 2

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 1 	Pushes & Pulls What's the biggest excavator?	Foundational for K-PS2-1. Plan & conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.	Constructing Explanations and Designing Solutions	PS2.A: Forces and Motion PS2.B: Types of Interactions PS3.C: Relationship Between Energy and Forces	Cause and Effect
Lesson 2 	Pushes, Pulls, & "Work Words" Why do builders need so many big machines?	Foundational for K-PS2-1. Plan & conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.	Obtaining, Evaluating, and Communicating Information	PS2.A: Forces and Motion PS2.B: Types of Interactions PS3.C: Relationship Between Energy and Forces	Cause and Effect
Lesson 3 	★ Strength of Pushes & Pulls How can you knock down a heavy wall?	K-PS2-1. Plan & conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.	Planning and Carrying Out Investigations Developing and Using Models	PS2.A: Forces and Motion PS2.B: Types of Interactions PS3.C: Relationship Between Energy and Forces	Cause and Effect
Lesson 4 	Speed & Direction of Force How can you knock down the most bowling pins?	Foundational for K-PS2-2. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.	Planning and Carrying Out Investigations	PS2.A: Forces and Motion	Cause and Effect

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 Read-Along Lesson
 New or Revised Lesson
 See all [Curriculum Updates](#)

Pushes & Pulls (Force Olympics) • Page 2 of 2

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 5 	Direction of Motion & Engineering How can we protect a mountain town from falling rocks?	1. Plan and carry out investigations to determine the effects of forces of different strengths and directions on the motion of an object, including speed, direction, and distance traveled. 2. Analyze data from investigations to determine whether a design solution provides sufficient force to change the speed or direction of an object.	Developing and Using Models Planning and Carrying Out Investigations Constructing Explanations and Designing Solutions	PS2.A: Forces and Motion ETS1.A: Defining Engineering Problems ETS1.B: Developing Possible Solutions ETS1.C: Optimizing the Design Solution	Cause and Effect
Lesson 6 	 Forces & Engineering How could you invent a trap?	2. Analyze data from investigations to determine whether a design solution provides sufficient force to change the speed or direction of an object.	Constructing Explanations and Designing Solutions	ETS1.B: Developing Possible Solutions	Structure and Function

All 1st Grade Units • Units may be taught in any order



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Alabama Science Performance Expectations:

- 1-LS1-1
- 1-LS1-2
- 1-LS3-1

Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task



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Alabama Science Performance Expectations:

- 1-LS1-1
- 1-LS3-1
- K-2-ETSI-1
- K-2-ETSI-2
- K-2-ETSI-3

Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task



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Alabama Science Performance Expectations:

- 1-ESS1-1
- 1-ESS1-2

Unit Breakdown:

- 4 Lessons & Activities
- 4 Lesson Assessments
- 4 Extension Blocks

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 4 Anchor Connections
- 1 Performance Task



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Alabama Science Performance Expectations:

- 1-ESS1-1

Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task



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Alabama Science Performance Expectations:

- 1-PS4-1
- 1-PS4-2
- 1-PS4-3
- 1-PS4-4
- K-2-ETSI-2





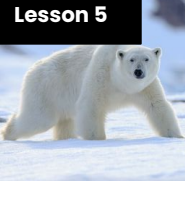
Unit Breakdown:

- 6 Lessons & Activities
- 6 Lesson Assessments
- 6 Extension Blocks

Anchor Layer Adds:



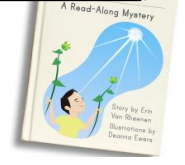
- 1 Anchor Phenomenon
- 6 Anchor Connections
- 1 Performance Task

Animal Traits & Survival (Animal Superpowers)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 1 	Parent & Offspring Traits How can you help a lost baby animal find its parents?	1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.	Constructing Explanations and Designing Solutions	LS3.A: Inheritance of Traits LS3.B: Variation of Traits	Patterns
Lesson 2 	Offspring Trait Variation Can you predict what an animal's babies will look like?	1-LS3-1. Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.	Constructing Explanations and Designing Solutions	LS3.A: Inheritance of Traits LS3.B: Variation of Traits	Patterns
Lesson 3 	★ Parent & Offspring Behavior Why are baby birds so loud?	1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.	Obtaining, Evaluating, and Communicating Information	LS1.B: Growth and Development of Organisms	Patterns
Lesson 4 	Animal Structures & Survival Why do birds have beaks?	1-LS1-1. 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.	Developing and Using Models Planning and Carrying Out Investigations Analyzing and Interpreting Data	LS1.A: Structure and Function	Patterns Structure and function
Lesson 5 	Camouflage & Animal Survival Why are polar bears white?	1-LS1-1. 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.	Developing and Using Models Planning and Carrying Out Investigations Engaging in Argument from Evidence	LS1.B: Growth and Development of Organisms	Patterns Structure and function

★ New or Revised Lesson
 See all [Curriculum Updates](#)





Plant Traits & Survival (Plant Superpowers)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 1 	Plant Traits & Offspring What will a baby plant look like when it grows up?	7. Make observations to identify the similarities and differences between offspring and their parents.	Constructing Explanations and Designing Solutions	LS3.A: Inheritance of Traits LS3.B: Variation of Traits	Patterns
Lesson 2 	Plant Survival & Engineering Why don't trees blow down in the wind?	5. Use information from observations to explain how various external features help living things survive, grow, and meet their needs.	Developing and Using Models Planning and Carrying Out Investigations Constructing Explanations and Designing Solutions	LS1.A: Structure and Function ETS1.A: Defining and Delimiting Engineering Problems ETS1.B: Developing Possible Solutions ETS1.C: Optimizing the Design Solution	Structure and function
Lesson 3 	Plant Movement & Survival What do sunflowers do when you're not looking?	5. Use information from observations to explain how various external features help living things survive, grow, and meet their needs.	Constructing Explanations and Designing Solutions	LS1.A: Structure and Function LS1.D: Information Processing	Structure and function

Day Patterns (Sun & Shadows)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 1 	Sun, Shadows, & Daily Patterns Could a statue's shadow move?	8. Observe, describe, and predict patterns of the sun, moon, and stars as they appear in the sky.	Planning and Carrying Out Investigations Analyzing and Interpreting Data	ESS1.A: The Universe and its Stars	Patterns
Lesson 2 	Sun, Shadows, & Daily Patterns What does your shadow do when you're not looking?	8. Observe, describe, and predict patterns of the sun, moon, and stars as they appear in the sky.	Analyzing and Interpreting Data	ESS1.A: The Universe and its Stars	Patterns
Lesson 3 	Sun & Daily Patterns How can the Sun help you if you're lost?	8. Observe, describe, and predict patterns of the sun, moon, and stars as they appear in the sky.	Developing and Using Models Engaging in Argument from Evidence	ESS1.A: The Universe and its Stars	Patterns
Lesson 4 	Daylight & Seasonal Patterns Why do you have to go to bed early in the summer?	9. Use observations of seasonal sunrise and sunset patterns to describe the relationship between the number of hours of daylight and the time of year.	Obtaining, Evaluating, and Communicating Information	ESS1.B: Earth and the Solar System	Patterns

Night Patterns (Moon & Stars)






	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 1 	Moon Phases & Patterns When can you see the full moon?	8. Observe, describe, and predict patterns of the sun, moon, and stars as they appear in the sky.	Analyzing and Interpreting Data	ESS1.A: The Universe and its Stars	Patterns
Lesson 2 	Stars & Daily Patterns Why do stars come out at night?	8. Observe, describe, and predict patterns of the sun, moon, and stars as they appear in the sky.	Developing and Using Models Planning and Carrying Out Investigations Constructing Explanations and Designing Solutions	ESS1.A: The Universe and its Stars	Patterns Cause and Effect
Lesson 3 	 Stars & Seasonal Patterns How can stars help you if you get lost?	8. Observe, describe, and predict patterns of the sun, moon, and stars as they appear in the sky.	Obtaining, Evaluating, and Communicating Information	ESS1.A: The Universe and its Stars	Patterns

Light, Sound, & Communication (Lights & Sounds) • Page 1 of 2

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 1 	Sounds & Vibrations How do they make silly sounds in cartoons?	1. Carry out investigations to provide evidence that the vibrations of matter can make sound and sound can make matter vibrate.	Constructing Explanations and Designing Solutions	PS4.A: Wave Properties	Cause and Effect
Lesson 2 	Sounds & Vibrations Where do sounds come from?	1. Carry out investigations to provide evidence that the vibrations of matter can make sound and sound can make matter vibrate.	Constructing Explanations and Designing Solutions	PS4.A: Wave Properties	Cause and Effect
Lesson 3 	Light, Materials, Transparent & Opaque What if there were no windows?	3. Plan and carry out investigations to determine how light is affected when it interacts with various types of materials.	Planning and Carrying Out Investigations Engaging in Argument from Evidence	PS4.B: Electromagnetic Radiation	Cause and Effect
Lesson 4 	Light & Illumination Can you see in the dark?	2. Use evidence from observations to explain that light is necessary in order for an object to be seen.	Planning and Carrying Out Investigations Constructing Explanations and Designing Solutions	PS4.B: Electromagnetic Radiation	Cause and Effect

Continued on next page

Light, Sound, & Communication (Lights & Sounds) • Page 2 of 2

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 5 	Light, Communication, & Engineering How could you send a secret message to someone far away?	4.  Design and construct a device that uses light or sound waves to send a communication signal over a distance.	Constructing Explanations and Designing Solutions	PS4.C: Information Technologies and Instrumentation ETS1.B: Developing Possible Solutions	Patterns
Lesson 6 	 Lights, Sounds, & Communication How do boats find their way in the fog?	4.  Design and construct a device that uses light or sound waves to send a communication signal over a distance.	Obtaining, Evaluating, and Communicating Information	PS4.C: Information Technologies and Instrumentation	Patterns

All 2nd Grade Units • Units may be taught in any order



Animal Biodiversity & Habitats

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Alabama Science Performance Expectations:

- 2-LS4-1
- K-2-ETSI-1
- K-2-ETSI-2
- K-2-ETSI-3

Unit Breakdown:

- 4 Lessons & Activities
- 4 Lesson Assessments
- 4 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 4 Anchor Connections
- 1 Performance Task



Plant Growth & Interactions



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Alabama Science Performance Expectations:

- 2-LS2-1
- 2-LS2-2
- K-2-ETSI-2
- K-2-ETSI-3

Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 4 Anchor Connections
- 1 Performance Task



Erosion & Earth's Surface

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Alabama Science Performance Expectations:

- 2-ESS1-1
- 2-ESS2-1
- 2-ESS2-2
- 2-ESS2-3
- K-2-ETSI-1
- K-2-ETSI-2
- K-2-ETSI-3

Unit Breakdown:

- 6 Lessons & Activities
- 6 Lesson Assessments
- 6 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 6 Anchor Connections
- 1 Performance Task



Material Properties

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Alabama Science Performance Expectations:

- 2-PS1-1
- 2-PS1-2
- 2-PS1-3
- 2-PS1-4
- K-2-ETSI-1
- K-2-ETSI-2
- K-2-ETSI-3

Unit Breakdown:

- 4 Lessons & Activities
- 4 Lesson Assessments
- 4 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 4 Anchor Connections
- 1 Performance Task



States of Matter

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Alabama Science Performance Expectations:

- 2-ESS2-3
- 2-PS1-2
- 2-PS1-4

Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks
- 1 Unit Assessment

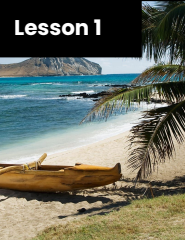




Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task

Animal Biodiversity & Habitats (Animal Adventures)

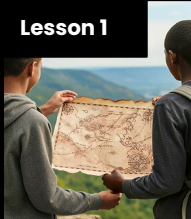
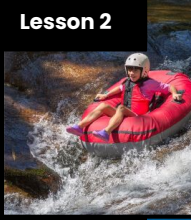


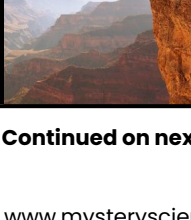
	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<p>Lesson 1</p>	<p>Biodiversity & Classification</p> <p>How many different kinds of animals are there?</p>	<p><i>Foundational for 7.</i> Obtain information to explain that there are many different kinds of living things that exist in habitats on land and in water.</p>	<p>Obtaining, Evaluating, and Communicating Information</p>	<p>LS4.D: Biodiversity and Humans</p>	<p>Patterns</p>
<p>Lesson 2</p>	<p>Habitat Diversity</p> <p>Why would a wild animal visit a playground?</p>	<p>7. Obtain information to explain that there are many different kinds of living things that exist in habitats on land and in water.</p>	<p>Analyzing and Interpreting Data</p> <p>Planning and Carrying Out Investigations</p>	<p>LS4.D: Biodiversity and Humans</p>	<p>Patterns</p>
<p>Lesson 3</p>	<p>Biodiversity, Habitats, & Species</p> <p>Why do frogs say “ribbit”?</p>	<p>7. Obtain information to explain that there are many different kinds of living things that exist in habitats on land and in water.</p>	<p>Analyzing and Interpreting Data</p> <p>Engaging in Argument from Evidence</p>	<p>LS4.D: Biodiversity and Humans</p>	<p>Patterns</p>
<p>Lesson 4</p>	<p>Biodiversity & Engineering</p> <p>How could you get more birds to visit a bird feeder?</p>	<p>7. Obtain information to explain that there are many different kinds of living things that exist in habitats on land and in water.</p>	<p>Asking Questions and Defining Problems</p> <p>Constructing Explanations and Designing Solutions</p> <p>Developing and Using Models</p>	<p>ETS1.A: Defining and Delimiting Engineering Problems</p> <p>ETS1.B: Developing Possible Solutions</p>	<p>Cause and Effect</p>

Plant Growth & Interactions (Plant Adventures)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
 <p>Lesson 1</p>	<p>Seed Dispersal</p> <p>How did a tree travel halfway around the world?</p>	<p>Foundational for 2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.</p> <p>K-2-ETS1-2. 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>	<p>Developing and Using Models</p> <p>Planning and Carrying Out Investigations</p>	<p>LS2.A: Interdependent Relationships in Ecosystems</p>	<p>Structure and Function</p>
 <p>Lesson 2</p>	<p>Animal Seed Dispersal</p> <p>Why do seeds have so many different shapes?</p>	<p>2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.</p>	<p>Developing and Using Models</p>	<p>LS2.A: Interdependent Relationships in Ecosystems</p>	<p>Structure and Function</p>
 <p>Lesson 3</p>	<p>★ Pollination</p> <p>Why do you find flowers and bees together?</p>	<p>2-LS2-2. Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants.</p>	<p>Developing and Using Models</p>	<p>LS2.A: Interdependent Relationships in Ecosystems</p>	<p>Structure and Function</p>
 <p>Lesson 4</p>	<p>Water, Sunlight, & Plant Growth</p> <p>Could a plant survive without light?</p>	<p>2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow.</p>	<p>Planning and Carrying Out Investigations</p> <p>Analyzing and Interpreting Data</p>	<p>LS2.A: Interdependent Relationships in Ecosystems</p>	<p>Cause and Effect</p>
 <p>Lesson 5</p>	<p>Plant Needs & Habitats</p> <p>How much water should you give a plant?</p>	<p>2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow.</p>	<p>Planning and Carrying Out Investigations</p>	<p>LS2.A: Interdependent Relationships in Ecosystems</p>	<p>Cause and Effect</p>



★ New or Revised Lesson
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Erosion & Earth's Surface (Work of Water) • Page 1 of 2




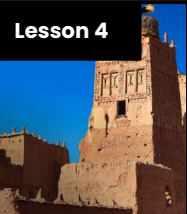
	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
 <p>Lesson 1</p> <p>Mapping Landforms & Bodies of Water</p> <p>Where's the best place to hide a treasure?</p>	<p>8. Use models to distinguish between the shapes and kinds of land and water on Earth.</p>	<p>Developing and Using Models</p>	<p>ESS2.B: Plate Tectonics and Large-Scale System Interactions</p>	<p>Patterns</p>	
 <p>Lesson 2</p> <p>Mapping: Mountains & Rivers</p> <p>If you floated down a river, where would you end up?</p>	<p>8. Use models to distinguish between the shapes and kinds of land and water on Earth.</p> <p>9. Obtain information to identify where water is found on Earth and determine whether it is a solid or a liquid.</p>	<p>Developing and Using Models</p> <p>Planning and Carrying Out Investigations</p>	<p>ESS2.B: Plate Tectonics and Large-Scale System Interactions</p> <p>ESS2.C: The Roles of Water in Erosion & Earth's Surface</p>	<p>Patterns</p>	
 <p>Lesson 3</p> <p>Rocks, Sand, & Erosion</p> <p>Why is there sand at the beach?</p>	<p>8. Use models to distinguish between the shapes and kinds of land and water on Earth.</p>	<p>Planning and Carrying Out Investigations</p> <p>Developing and Using Models</p>	<p>ESS2.B: Plate Tectonics and Large-Scale System Interactions</p>	<p>Cause and Effect</p> <p>Stability and Change</p>	
 <p>Lesson 4</p> <p>Mapping & Severe Weather</p> <p>Where do flash floods happen?</p>	<p>8. Use models to distinguish between the shapes and kinds of land and water on Earth.</p> <p>10. Use a variety of sources to provide evidence that Earth's events can occur slowly or rapidly.</p>	<p>Developing and Using Models</p>	<p>ESS2.B: Plate Tectonics and Large-Scale System Interactions</p>	<p>Patterns</p>	
 <p>Lesson 5</p> <p>Erosion, Earth's Surface, & Landforms</p> <p>What's strong enough to make a canyon?</p>	<p>8. Use models to distinguish between the shapes and kinds of land and water on Earth.</p> <p>10. Use a variety of sources to provide evidence that Earth's events can occur slowly or rapidly.</p>	<p>Planning and Carrying Out Investigations</p> <p>Constructing Explanations and Designing Solutions</p>	<p>ESS1.C: The History of Planet Earth</p> <p>ESS2.A: Earth Materials and Systems</p>	<p>Cause and Effect</p> <p>Stability and Change</p>	

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Erosion & Earth's Surface (Work of Water) • Page 2 of 2

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<p>Lesson 6</p> 	<p>Erosion & Engineering</p> <p>How can you stop a landslide?</p>	<p>11.  Evaluate multiple solutions designed to slow or prevent wind or water from changing the shape of Earth's surface.</p>	<p>Asking Questions and Defining Problems</p> <p>Constructing Explanations and Designing Solutions</p>	<p>ESS1.C: The History of Planet Earth</p> <p>ESS2.A: Earth Materials and Systems</p> <p>ETS1.A: Defining and Delimiting Engineering Problems</p> <p>ETS1.B: Developing Possible Solutions</p> <p>ETS1.C: Optimizing the Design Solution</p>	<p>Stability and Change</p> <p>Structure and Function</p>

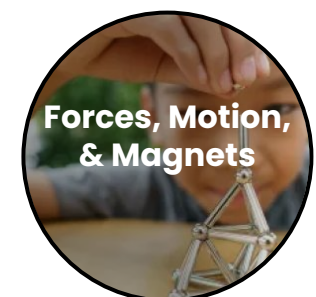
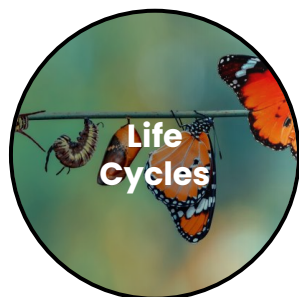
Material Properties (Material Magic)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
 <p>Lesson 1</p>	<p>Material Properties & Engineering</p> <p>Why do we wear clothes?</p>	<p>1. Plan and carry out investigations to compare, contrast, and classify various solid and liquid materials according to physical properties, including color and texture.</p> <p>2. Conduct investigations to determine suitable uses of natural and manufactured materials based on their observable properties, including strength, flexibility, hardness, absorbency, and texture.</p>	<p>Asking Questions and Defining Problems</p> <p>Planning and Carrying Out Investigations</p> <p>Constructing Explanations and Designing Solutions</p>	<p>PS1.A: Structure and Properties of Matter</p> <p>ETS1.A: Defining and Delimiting Engineering Problems</p> <p>ETS1.B: Developing Possible Solutions</p>	<p>Patterns</p> <p>Cause and Effect</p>
 <p>Lesson 2</p>	<p>Classify Materials: Insulators & Conductors</p> <p>Can you really fry an egg on a hot sidewalk?</p>	<p>2. Conduct investigations to determine suitable uses of natural and manufactured materials based on their observable properties, including strength, flexibility, hardness, absorbency, and texture.</p>	<p>Planning and Carrying Out Investigations</p> <p>Analyzing and Interpreting Data</p>	<p>PS1.A: Structure and Properties of Matter</p>	<p>Patterns</p> <p>Cause and Effect</p>
 <p>Lesson 3</p>	<p>Material Building Blocks & Engineering</p> <p>Could you build a house out of paper?</p>	<p>3. Demonstrate and explain how structures made from a small set of pieces can be disassembled and then reassembled as new and different structures.</p>	<p>Constructing Explanations and Designing Solutions</p> <p>Developing and Using Models</p>	<p>PS1.A: Structure and Properties of Matter</p> <p>ETS1.B: Developing Possible Solutions</p> <p>ETS1.C: Optimizing the Design Solution</p>	<p>Energy and Matter</p> <p>Cause and Effect</p>
 <p>Lesson 4</p>	<p>Soil Properties</p> <p>How do you build a city out of mud?</p>	<p>1. Plan and carry out investigations to compare, contrast, and classify various solid and liquid materials according to physical properties, including color and texture.</p> <p>2. Conduct investigations to determine suitable uses of natural and manufactured materials based on their observable properties, including strength, flexibility, hardness, absorbency, and texture.</p>	<p>Planning and Carrying Out Investigations</p> <p>Analyzing and Interpreting Data</p>	<p>PS1.A: Structure and Properties of Matter</p>	<p>Patterns</p>

States of Matter (States of Matter)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
 <p>Lesson 1</p> <p>Liquid Water & Solid Ice</p> <p>Where do animals find the water they need?</p>	<p>9. Obtain information to identify where water is found on Earth and determine whether it is a solid or a liquid.</p>	<p>Obtaining, Evaluating, and Communicating Information</p>	<p>ESS2.C: The Roles of Water in Earth's Surface Processes</p>	<p>Patterns</p>	
 <p>Lesson 2</p> <p>Reversible & Irreversible Changes</p> <p>How is an ice cube like a crayon?</p>	<p>4. Provide evidence that some changes in matter caused by heating or cooling can be reversed and some changes are irreversible.</p>	<p>Engaging in Argument from Evidence</p> <p>Planning and Carrying Out Investigations</p>	<p>PS1.B: Chemical Reactions</p>	<p>Cause and Effect</p>	
 <p>Lesson 3</p> <p>Heating, Cooling, & States of Matter</p> <p>Why are so many toys made out of plastic?</p>	<p>2. Conduct investigations to determine suitable uses of natural and manufactured materials based on their observable properties, including strength, flexibility, hardness, absorbency, and texture.</p> <p>4. Provide evidence that some changes in matter caused by heating or cooling can be reversed and some changes are irreversible.</p>	<p>Planning and Carrying Out Investigations</p> <p>Analyzing and Interpreting Data</p>	<p>PS1.A: Structure and Properties of Matter</p> <p>PS1.B: Chemical Reactions</p>	<p>Cause and Effect</p> <p>Energy and Matter</p>	

All 3rd Grade Units • Units may be taught in any order



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Alabama Science Performance Expectations:

- 3-LS4-1

Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task

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Alabama Science Performance Expectations:

- 3-LS1-1
- 3-LS4-4
- 3-5-ETS1-2

Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task

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Alabama Science Performance Expectations:

- 3-LS2-1
- 3-LS3-1
- 3-LS3-2
- 3-LS4-2
- 3-LS4-3

Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task

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Alabama Science Performance Expectations:

- 3-ESS2-1
- 3-ESS2-2
- 3-ESS3-1
- 3-5-ETS1-1
- 3-5-ETS1-2
- 3-5-ETS1-3

Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task

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Alabama Science Performance Expectations:

- 3-PS2-1
- 3-PS2-2
- 3-PS2-3
- 3-PS2-4
- 3-5-ETS1-1
- 3-5-ETS1-2
- 3-5-ETS1-3

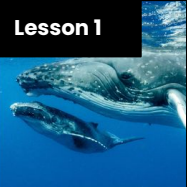
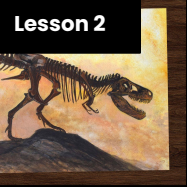

Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task




Fossils & Changing Environments (Animals Through Time)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
 <p>Lesson 1</p>	<p>Habitats, Fossils, & Environments Over Time</p> <p>Where can you find whales in a desert?</p>	<p>8. Analyze and interpret data from fossils to provide evidence of the existence of organisms and information about the environments in which they lived.</p>	<p>Analyzing and Interpreting Data</p>	<p>LS4.A: Evidence of Common Ancestry and Diversity</p>	<p>Scale, Proportion, and Quantity</p>
 <p>Lesson 2</p>	<p>Fossil Evidence & Dinosaurs</p> <p>How do we know what dinosaurs looked like?</p>	<p>8. Analyze and interpret data from fossils to provide evidence of the existence of organisms and information about the environments in which they lived.</p>	<p>Analyzing and Interpreting Data</p> <p>Engaging in Argument from Evidence</p>	<p>LS4.A: Evidence of Common Ancestry and Diversity</p>	<p>Structure and Function</p> <p>Patterns</p>
 <p>Lesson 3</p>	<p>Trace Fossil Evidence & Animal Movement</p> <p>Can you outrun a dinosaur?</p>	<p>8. Analyze and interpret data from fossils to provide evidence of the existence of organisms and information about the environments in which they lived.</p>	<p>Using Mathematics and Computational Thinking</p> <p>Planning and Carrying Out Investigations</p>	<p>LS4.A: Evidence of Common Ancestry and Diversity</p>	<p>Patterns</p>

Life Cycles (Circle of Life)



	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 1 	Animal Life Cycles How is your life like an alligator's life?	5. Develop and use models to compare the diverse life cycles of organisms other than humans, including birth, growth, reproduction, and death.	Developing and Using Models	LS1.B: Growth and Development of Organisms	Patterns
Lesson 2 	Environmental Change & Engineering What's the best way to get rid of mosquitoes?	12. Obtain and communicate information regarding the impact of existing solutions on plant and animal populations when environmental changes occur.	Obtaining, Evaluating, and Communicating Information Constructing Explanations and Designing Solutions	LS4.D: Biodiversity and Humans LS2.C: Ecosystem Dynamics, Functioning, & Resilience ETS1.B: Developing Possible Solutions	Cause and Effect Systems and System Models
Lesson 3 	Pollination & Plant Reproduction Why do plants grow flowers?	5. Develop and use models to compare the diverse life cycles of organisms other than humans, including birth, growth, reproduction, and death.	Developing and Using Models Analyzing and Interpreting Data	LS1.B: Growth and Development of Organisms	Patterns Structure and Function
Lesson 4 	Fruit, Seeds, & Plant Reproduction Why do plants give us fruit?	5. Develop and use models to compare the diverse life cycles of organisms other than humans, including birth, growth, reproduction, and death.	Analyzing and Interpreting Data	LS1.B: Growth and Development of Organisms	Patterns Structure and Function
Lesson 5 	Plant Life Cycles Why are there so many different kinds of flowers?	5. Develop and use models to compare the diverse life cycles of organisms other than humans, including birth, growth, reproduction, and death.	Developing and Using Models	LS1.B: Growth and Development of Organisms	Patterns

Heredity, Survival, & Selection (Fates of Traits) • Page 1 of 2

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
 <p>Lesson 1</p>	<p>Traits & Inheritance</p> <p>How do you identify a mysterious fruit?</p>	<p><i>Foundational for 6.</i> Use data to provide evidence that plants and animals have observable traits inherited from parents and that variations of these traits exist in groups of similar organisms.</p>	<p>Analyzing and Interpreting Data</p>	<p>LS3.A: Inheritance of Traits</p>	<p>Patterns</p>
 <p>Lesson 2</p>	<p>Trait Variation, Inheritance, & Artificial Selection</p> <p>What do dogs and pigeons have in common?</p>	<p>6. Use data to provide evidence that plants and animals have observable traits inherited from parents and that variations of these traits exist in groups of similar organisms.</p>	<p>Analyzing and Interpreting Data</p>	<p>LS3.A: Inheritance of Traits</p> <p>LS3.B: Variation of Traits</p>	<p>Patterns</p>
 <p>Lesson 3</p>	<p>Trait Variation, Survival, & Natural Selection</p> <p>How could a lizard's toes help it survive?</p>	<p>6. Use data to provide evidence that plants and animals have observable traits inherited from parents and that variations of these traits exist in groups of similar organisms.</p> <p>9. Construct an explanation from evidence of how variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.</p> <p>10. Make a claim from evidence that an organism's likelihood of survival depends upon access to sufficient resources in its habitat, including sunlight, air, water, food, and shelter.</p>	<p>Constructing Explanations and Designing Solutions</p> <p>Analyzing and Interpreting Data</p> <p>Using Mathematics and Computational Thinking</p>	<p>LS3.A: Inheritance of Traits</p> <p>LS3.B: Variation of Traits</p> <p>LS4.B: Natural Selection</p> <p>LS4.C: Adaptation</p>	<p>Cause and Effect</p> <p>Patterns</p> <p>Stability and Change</p>




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Heredity, Survival, & Selection (Fates of Traits) • Page 2 of 2

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 4 	<p>★ Animal Groups & Survival</p> <p>Why do some animals live in groups?</p>	<p>3-LS2-1. Construct an argument that some animals form groups that help members survive.</p>	<p>Obtaining, Evaluating, and Communicating Information</p> <p>Engaging in Argument from Evidence</p>	<p>LS2.D: Social Interactions and Group Behavior</p>	<p>Cause and Effect</p>
Lesson 5 	<p>Traits & Environmental Variation</p> <p>How long can people (and animals) survive in outer space?</p>	<p>3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment.</p>	<p>Constructing Explanations and Designing Solutions</p>	<p>LS3.A: Inheritance of Traits</p> <p>LS3.B: Variation of Traits</p>	<p>Cause and Effect</p>

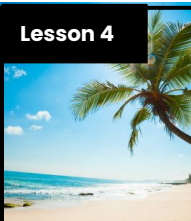

★ New or Revised Lesson
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Weather & Climate (Stormy Skies) • Page 1 of 2


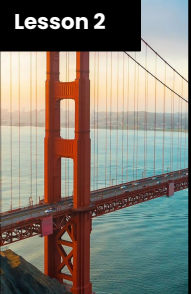

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
 <p>Lesson 1</p>	<p>Water Cycle & States of Matter</p> <p>Where do clouds come from?</p>	<p><i>Foundational for</i> 13. Represent data in tables or graphical displays to reveal typical weather patterns during a particular season.</p>	<p>Planning and Carrying Out Investigations</p> <p>Developing and Using Models</p>	<p>ESS2.D: Weather and Climate</p>	<p>Structure and Function</p> <p>Stability and Change</p>
 <p>Lesson 2</p>	<p>Local Weather Patterns & Weather Prediction</p> <p>How can we predict when it's going to storm?</p>	<p><i>Foundational for</i> 13. Represent data in tables or graphical displays to reveal typical weather patterns during a particular season.</p>	<p>Analyzing and Interpreting Data</p>	<p>ESS2.D: Weather and Climate</p>	<p>Patterns</p>
 <p>Lesson 3</p>	<p>Seasonal Weather Patterns</p> <p>Where's the best place to build a snow fort?</p>	<p>13. Represent data in tables or graphical displays to reveal typical weather patterns during a particular season.</p>	<p>Analyzing and Interpreting Data</p>	<p>ESS2.D: Weather and Climate</p>	<p>Patterns</p>

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Weather & Climate (Stormy Skies) • Page 2 of 2




	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
 <p>Lesson 4</p>	<p>Climate & Global Weather Patterns</p> <p>Why are some places always hot?</p>	<p>13. Represent data in tables or graphical displays to reveal typical weather patterns during a particular season.</p> <p>14. Use information from a variety of sources to describe climates in different regions of the world.</p>	<p>Obtaining, Evaluating, and Communicating Information</p> <p>Analyzing and Interpreting Data</p>	<p>ESS2.D: Weather and Climate</p>	<p>Patterns</p>
 <p>Lesson 5</p>	<p>Natural Hazards & Engineering</p> <p>How can you keep a house from blowing away in a windstorm?</p>	<p>15. Obtain and communicate information on the effectiveness of existing solutions designed to reduce the impact of weather-related hazards.</p>	<p>Asking Questions and Defining Problems</p> <p>Constructing Explanations and Designing Solutions</p> <p>Analyzing and Interpreting Data</p>	<p>ESS3.B: Natural Hazards</p> <p>ETS1.A: Defining and Delimiting Engineering Problems</p> <p>ETS1.B: Developing Possible Solutions</p> <p>ETS1.C: Optimizing the Design Solution</p>	<p>Cause and Effect</p>

Forces, Motion, & Magnets (Invisible Forces) • Page 1 of 2

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
 <p>Lesson 1</p>	<p>Balanced & Unbalanced Forces</p> <p>How could you win a tug-of-war against a bunch of adults?</p>	<p><i>Foundational for</i> 1. Conduct investigations to explain the effects of balanced and unbalanced forces exerted on an object, varying the size, number, and direction of the forces.</p>	<p>Planning and Carrying Out Investigations</p> <p>Constructing Explanations and Designing Solutions</p>	<p>PS2.A: Forces and Motion</p> <p>PS2.B: Types of Interactions</p>	<p>Cause and Effect</p>
 <p>Lesson 2</p>	<p>Balanced Forces & Engineering</p> <p>What makes bridges so strong?</p>	<p><i>Foundational for</i> 1. Conduct investigations to explain the effects of balanced and unbalanced forces exerted on an object, varying the size, number, and direction of the forces.</p>	<p>Asking Questions and Defining Problems</p> <p>Constructing Explanations and Designing Solutions</p>	<p>ETS1.A: Defining and Delimiting Engineering Problems</p> <p>ETS1.B: Developing Possible Solutions</p> <p>ETS1.C: Optimizing the Design Solution</p>	<p>Structure and Function</p>
 <p>Lesson 3</p>	<p>Patterns of Motion, Gravity, & Friction</p> <p>How high can you swing on a flying trapeze?</p>	<p>2. Observe and measure an object's motion to provide evidence that a pattern of motion can be used to predict future motion.</p>	<p>Developing and Using Models</p> <p>Planning and Carrying Out Investigations</p>	<p>PS2.A: Forces and Motion</p>	<p>Patterns</p> <p>Cause and Effect</p>

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Forces, Motion, & Magnets (Invisible Forces) • Page 1 of 2

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
 <p>Lesson 4</p>	<p>Magnets & Forces</p> <p>What can magnets do?</p>	<p>3. Conduct investigations to determine cause and effect relationships between objects not in contact with one another, including magnetic and electrostatic forces.</p>	<p>Asking Questions and Defining Problems</p>	<p>PS2.B: Types of Interactions</p>	<p>Cause and Effect</p>
 <p>Lesson 5</p>	<p>Magnets & Engineering</p> <p>How can you unlock a door using a magnet?</p>	<p>4.  Apply scientific ideas about magnetic interactions to solve a problem using the engineering design process.</p>	<p>Asking Questions and Defining Problems</p> <p>Constructing Explanations and Designing Solutions</p>	<p>PS2.B: Types of Interactions</p> <p>ETS1.A: Defining and Delimiting Engineering Problems</p> <p>ETS1.B: Developing Possible Solutions</p> <p>ETS1.C: Optimizing the Design Solution</p>	<p>Cause and Effect</p>

All 4th Grade Units • Units may be taught in any order



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Alabama Science Performance Expectations:

- 4-LS1-1
- 4-LS1-2
- 4-PS4-2

Unit Breakdown:

- 4 Lessons & Activities
- 4 Lesson Assessments
- 4 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 4 Anchor Connections
- 1 Performance Task

Alabama Science Performance Expectations:

- 4-LS1-1
- 4-LS1-2

Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task

Alabama Science Performance Expectations:

- 4-ESS1-1
- 4-ESS2-1
- 4-ESS2-2
- 4-ESS3-2
- 3-5-ETSI-1
- 3-5-ETSI-2

Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task

Alabama Science Performance Expectations:

- 4-PS4-1
- 4-PS4-3
- 3-5-ETSI-2
- 3-5-ETSI-3

Unit Breakdown:

- 4 Lessons & Activities
- 4 Lesson Assessments
- 4 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 4 Anchor Connections
- 1 Performance Task

Alabama Science Performance Expectations:

- 4-PS3-1
- 4-PS3-3
- 4-PS3-4
- 3-5-ETSI-1
- 3-5-ETSI-2
- 3-5-ETSI-3

Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task

Alabama Science Performance Expectations:

- 4-ESS3-1
- 4-PS3-2
- 4-PS3-4
- 3-5-ETSI-1




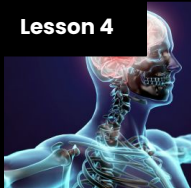
Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks
- 1 Unit Assessment


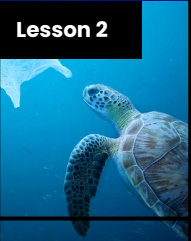

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task



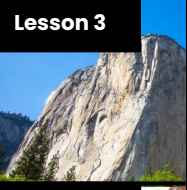
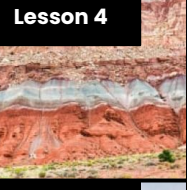

Human Body, Vision, & The Brain (Human Machine)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
 <p>Lesson 1</p> <p>Muscles & Skeleton</p> <p>Why do your biceps bulge?</p>	<p>8. Make a claim, using evidence, that the functions of both internal and external structures of plants and animals (including humans) support growth, survival, and behavior.</p>	<p>Developing and Using Models</p> <p>Constructing Explanations and Designing Solutions</p>	<p>LS1.A: Structure and Function</p>	<p>Systems and System Models</p> <p>Cause and Effect</p>	
 <p>Lesson 2</p> <p>Light, Eyes, & Vision</p> <p>What do people who are blind see?</p>	<p>7. Develop a model to demonstrate that light reflecting from objects and entering the eyes allow objects to be seen.</p> <p>8. Make a claim, using evidence, that the functions of both internal and external structures of plants and animals (including humans) support growth, survival, and behavior.</p>	<p>Developing and Using Models</p> <p>Constructing Explanations and Designing Solutions</p>	<p>LS1.A: Structure and Function</p> <p>PS4.B: Electromagnetic Radiation</p>	<p>Systems and System Models</p> <p>Cause and Effect</p>	
 <p>Lesson 3</p> <p>Structure & Function of Eyes</p> <p>How can some animals see in the dark?</p>	<p>7. Develop a model to demonstrate that light reflecting from objects and entering the eyes allow objects to be seen.</p> <p>8. Make a claim, using evidence, that the functions of both internal and external structures of plants and animals (including humans) support growth, survival, and behavior.</p>	<p>Planning and Carrying Out Investigations</p> <p>Developing and Using Models</p> <p>Constructing Explanations and Designing Solutions</p>	<p>LS1.A: Structure and Function</p> <p>PS4.B: Electromagnetic Radiation</p>	<p>Systems and System Models</p> <p>Cause and Effect</p>	
 <p>Lesson 4</p> <p>Brain, Nerves, & Information Processing</p> <p>How does your brain control your body?</p>	<p>9. Carry out investigations to support a claim that different animals receive information through their senses, process that information, and respond in various ways.</p>	<p>Planning and Carrying Out Investigations</p> <p>Analyzing and Interpreting Data</p>	<p>LS1.D: Information Processing</p>	<p>Systems and System Models</p>	





Animal & Plant Adaptations (Animal & Plant Adaptations)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
 <p>Lesson 1</p>	<p>Animal Adaptations</p> <p>Why do some sea creatures look so strange?</p>	<p>8. Make a claim, using evidence, that the functions of both internal and external structures of plants and animals (including humans) support growth, survival, and behavior.</p>	<p>Engaging in Argument from Evidence</p>	<p>LS1.A: Structure and Function</p>	<p>Systems and System Models</p>
 <p>Lesson 2</p>	<p>Learned Behavior & Instinct</p> <p>Why would a sea turtle eat a plastic bag?</p>	<p>9. Carry out investigations to support a claim that different animals receive information through their senses, process that information, and respond in various ways.</p>	<p>Developing and Using Models</p> <p>Constructing Explanations and Designing Solutions</p>	<p>LS1.D: Information Processing</p>	<p>Systems and System Models</p>
 <p>Lesson 3</p>	<p>Plant Adaptations</p> <p>Why don't the same trees grow everywhere?</p>	<p>8. Make a claim, using evidence, that the functions of both internal and external structures of plants and animals (including humans) support growth, survival, and behavior.</p>	<p>Engaging in Argument from Evidence</p> <p>Developing and Using Models</p>	<p>LS1.A: Structure and Function</p>	<p>Systems and System Models</p>






Earth's Features & Processes (Birth of Rocks)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 1 	Volcanoes & Patterns of Earth's Features Could a volcano pop up where you live?	4-ESS2-2. Analyze and interpret data from maps to describe patterns of Earth's features.	Analyzing and Interpreting Data Engaging in Argument from Evidence	ESS2.B: Plate Tectonics and Large-Scale System Interactions	Patterns
Lesson 2 	Volcanoes & Rock Cycle Why do some volcanoes explode?	4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.	Constructing Explanations and Designing Solutions	ESS1.C: The History of Planet Earth	Cause and Effect
Lesson 3 	Weathering & Erosion Will a mountain last forever?	4-ESS2-1. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.	Planning and Carrying Out Investigations Analyzing and Interpreting Data	ESS2.A: Earth Materials and Systems ESS2.E: Biogeology	Cause and Effect
Lesson 4 	Sedimentary Rock & Fossils What did your town look like 100 million years ago?	4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.	Constructing Explanations and Designing Solutions Developing and Using Models	ESS1.C: The History of Planet Earth	Patterns
Lesson 5 	★ Earthquakes & Engineering Can you design a building that survives an earthquake?	4-ESS3-2. Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans. 3-5-ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria and constraints on materials, time, or cost. 3-5-ETS1-2. 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.	Constructing Explanations and Designing Solutions Asking Questions and Defining Problems	ESS3.B: Natural Hazards ETS1.A: Defining and Delimiting Engineering Problems ETS1.B: Designing Solutions to Engineering Problems	Cause and Effect

Sound, Waves, & Communication (Waves of Sound)



	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
 <p>Lesson 1</p>	<p>Pattern Transfer & Technology</p> <p>How do you send a secret code?</p>	<p>6. Construct an explanation of how light, sound, and digitized information are transferred by waves.</p>	<p>Constructing Explanations and Designing Solutions</p>	<p>PS4.C: Information Technologies and Instrumentation</p> <p>ETS1.C: Optimizing the Design Solution</p>	<p>Patterns</p>
 <p>Lesson 2</p>	<p>Sound, Vibration, & Engineering</p> <p>How far can a whisper travel?</p>	<p><i>Foundational for 5.</i> Develop and use models to describe amplitude and wavelength patterns and how waves can cause objects to move.</p>	<p>Developing and Using Models</p> <p>Planning and Carrying Out Investigations</p>	<p>PS4.A: Wave Properties</p> <p>ETS1.B: Developing Possible Solutions</p>	<p>Patterns</p>
 <p>Lesson 3</p>	<p>Sound & Vibrations</p> <p>What would happen if you screamed in outer space?</p>	<p><i>Foundational for 5.</i> Develop and use models to describe amplitude and wavelength patterns and how waves can cause objects to move.</p>	<p>Developing and Using Models</p>	<p>PS4.A: Wave Properties</p>	<p>Patterns</p>
 <p>Lesson 4</p>	<p>Sound Waves & Wavelength</p> <p>Why are some sounds high and some sounds low?</p>	<p>5. Develop and use models to describe amplitude and wavelength patterns and how waves can cause objects to move.</p>	<p>Developing and Using Models</p>	<p>PS4.A: Wave Properties</p>	<p>Patterns</p>

Energy & Energy Transfer (Energizing Everything) • Page 1 of 2

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<p>Lesson 1</p> 	<p>Speed & Energy</p> <p>How is your body similar to a car?</p>	<p>1. Use evidence to explain the relationship between the speed of an object and its energy.</p>	<p>Analyzing and Interpreting Data</p> <p>Constructing Explanations and Designing Solutions</p>	<p>PS3.A: Definitions of Energy</p>	<p>Energy and Matter</p> <p>Systems and System Models</p>
<p>Lesson 2</p> 	<p>Gravitational Energy, Speed, & Collisions</p> <p>What makes roller coasters go so fast?</p>	<p>1. Use evidence to explain the relationship between the speed of an object and its energy.</p> <p>2. Plan and carry out investigations to answer questions regarding changes in energy when objects collide, and predict reasonable outcomes based on observed patterns.</p>	<p>Developing and Using Models</p> <p>Analyzing and Interpreting Data</p>	<p>PS3.A: Definitions of Energy</p> <p>PS3.B: Conservation of Energy and Energy Transfer</p>	<p>Energy and Matter</p> <p>Systems and System Models</p>
<p>Lesson 3</p> 	<p>Collisions & Energy Transfer</p> <p>How can marbles save the world?</p>	<p>2. Plan and carry out investigations to answer questions regarding changes in energy when objects collide, and predict reasonable outcomes based on observed patterns.</p>	<p>Asking Questions and Defining Problems</p>	<p>PS3.A: Definitions of Energy</p> <p>PS3.B: Conservation of Energy and Energy Transfer</p> <p>PS3.C: Relationship Between Energy and Forces</p>	<p>Energy and Matter</p>
<p>Lesson 4</p> 	<p>Energy Transfer & Engineering</p> <p>Could you knock down a building using only dominoes?</p>	<p>4.  Design, construct, and test a device that changes energy from one form to another.</p>	<p>Developing and Using Models</p>	<p>PS3.B: Conservation of Energy and Energy Transfer</p> <p>PS3.C: Relationship Between Energy and Forces</p> <p>ETS1.A: Defining and Delimiting Engineering Problems</p>	<p>Energy and Matter</p>

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Energy & Energy Transfer (Energizing Everything) • Page 1 of 2

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<p>Lesson 5</p> 	<p>Energy Transfer & Engineering</p> <p>Can you build a chain reaction machine?</p>	<p>4.  Design, construct, and test a device that changes energy from one form to another.</p>	<p>Developing and Using Models</p>	<p>PS3.A: Definitions of Energy</p> <p>PS3.C: Relationship Between Energy and Forces</p> <p>ETS1.A: Defining and Delimiting Engineering Problems</p> <p>ETS1.B: Developing Possible Solutions</p> <p>ETS1.C: Optimizing the Design Solution</p>	<p>Energy and Matter</p>

Electricity, Light, & Heat (Electricity, Light & Heat)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 1 	Renewable Energy & Natural Resources What's the best way to light up a city?	14. Gather information to describe how the use of energy derived from renewable and nonrenewable resources affects the environment.	Obtaining, Evaluating, and Communicating Information Using Mathematics and Computational Thinking	ESS3.A: Natural Resources	Energy and Matter Cause and Effect
Lesson 2 	Electrical Energy What if there were no electricity?	3. Plan and carry out investigations to provide evidence that energy is transferred by sound, light, heat, and electric currents. 4. Design, construct, and test a device that changes energy from one form to another.	Constructing Explanations and Designing Solutions Developing and Using Models	PS3.D: Energy in Chemical Processes and Everyday Life ETS1.A: Defining and Delimiting Engineering Problems ETS1.B: Developing Possible Solutions ETS1.C: Optimizing the Design Solution	Energy and Matter
Lesson 3 	Heat Energy & Energy Transfer How long did it take to travel across the country before cars and planes?	3. Plan and carry out investigations to provide evidence that energy is transferred by sound, light, heat, and electric currents.	Planning and Carrying Out Investigations	PS3.B: Conservation of Energy and Energy Transfer PS3.D: Energy in Chemical Processes and Everyday Life	Energy and Matter

All 5th Grade Units • Units may be taught in any order



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Alabama Science Performance Expectations:

- 5-LS1-1
- 5-LS2-1
- 5-ESS3-1
- 5-PS3-1

Unit Breakdown:

- 7 Lessons & Activities
- 7 Lesson Assessments
- 7 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 7 Anchor Connections
- 1 Performance Task



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Alabama Science Performance Expectations:

- 5-ESS2-1
- 5-ESS2-2
- 5-PS1-2
- 3-5-ETSI-1
- 3-5-ETSI-2
- 3-5-ETSI-3

Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task



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Alabama Science Performance Expectations:

- 5-ESS1-2

Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task



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Alabama Science Performance Expectations:

- 5-ESS1-1
- 5-PS2-1

Unit Breakdown:

- 3 Lessons & Activities
- 3 Lesson Assessments
- 3 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 3 Anchor Connections
- 1 Performance Task



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Alabama Science Performance Expectations:

- 5-PS1-1
- 5-PS1-2
- 5-PS1-3
- 5-PS1-4

Unit Breakdown:

- 5 Lessons & Activities
- 5 Lesson Assessments
- 5 Extension Blocks
- 1 Unit Assessment

Anchor Layer Adds:

- 1 Anchor Phenomenon
- 5 Anchor Connections
- 1 Performance Task




★ New or Revised Lessons
✓ Unit Restructured for the 2025-2026 School Year
See all [Curriculum Updates](#)

Ecosystems & The Food Web (Web of Life) • Page 1 of 2

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<p>Lesson 1</p>	<p>Food Chains & Matter Flow</p> <p>What if all the ants disappeared?</p>	<p>9. Create and use a model to explain the transfer of matter and energy between the environment and organisms within it.</p>	<p>Developing and Using Models</p>	<p>LS2.A: Interdependent Relationships in Ecosystems</p> <p>LS2.B: Cycles of Matter and Energy Transfer in Ecosystems</p>	<p>Energy and Matter</p> <p>Systems and System Models</p>
<p>Lesson 2</p>	<p>Plant Growth & Matter</p> <p>How does a tiny seed become one of the heaviest trees on Earth?</p>	<p>7. Support an argument from evidence that plants primarily use air and water to process matter needed for growth.</p> <p>9. Create and use a model to explain the transfer of matter and energy between the environment and organisms within it.</p>	<p>Engaging in Argument from Evidence</p> <p>Constructing Explanations and Designing Solutions</p>	<p>LS1.C: Organization for Matter and Energy Flow in Organisms</p> <p>LS2.B: Cycles of Matter and Energy Transfer in Ecosystems</p>	<p>Cause and Effect</p> <p>Energy and Matter</p>
<p>Lesson 3</p>	<p>Decomposers & Matter Flow</p> <p>Where do fallen leaves go?</p>	<p>9. Create and use a model to explain the transfer of matter and energy between the environment and organisms within it.</p>	<p>Developing and Using Models</p> <p>Analyzing and Interpreting Data</p> <p>Constructing Explanations and Designing Solutions</p>	<p>LS2.A: Interdependent Relationships in Ecosystems</p> <p>LS2.B: Cycles of Matter and Energy Transfer in Ecosystems</p>	<p>Cause and Effect</p> <p>Energy and Matter</p>
<p>Lesson 4</p>	<p>Decomposers & Soil Nutrients</p> <p>Do worms really eat dirt?</p>	<p>9. Create and use a model to explain the transfer of matter and energy between the environment and organisms within it.</p>	<p>Planning and Carrying Out Investigations</p>	<p>LS2.A: Interdependent Relationships in Ecosystems</p> <p>LS2.B: Cycles of Matter and Energy Transfer in Ecosystems</p>	<p>Energy and Matter</p>

Continued on next page

Ecosystems & The Food Web (Web of Life) • Page 2 of 2

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<p>Lesson 5</p> 	<p>★ Ecosystems & Matter Cycle</p> <p>How could a fish feed a forest?</p>	<p>5-LS2-1. Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.</p>	<p>Developing and Using Models</p>	<p>LS2.A: Interdependent Relationships in Ecosystems</p> <p>LS2.B: Cycles of Matter and Energy Transfer in Ecosystems</p>	<p>Systems and System Models</p> <p>Energy and Matter</p>
<p>Lesson 6</p> 	<p>Protecting Environments</p> <p>How can we protect Earth's environments?</p>	<p>5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.</p>	<p>Obtaining, Evaluating, and Communicating Information</p>	<p>ESS3.C: Human Impacts on Earth Systems</p>	<p>Systems and System Models</p>
<p>Lesson 7</p> 	<p>Food Webs & Flow of Energy</p> <p>Why did the dinosaurs go extinct?</p>	<p>5-PS3-1. Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.</p>	<p>Developing and Using Models</p> <p>Constructing Explanations and Designing Solutions</p>	<p>PS3.D: Energy in Chemical Processes and Everyday Life</p> <p>LS1.C: Organization for Matter and Energy Flow in Organisms</p>	<p>Energy and Matter</p> <p>Systems and System Models</p>

★ New or Revised Lessons
See all [Curriculum Updates](#)



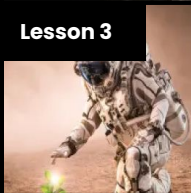
Water Cycle & Earth's Systems (Watery Planet)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
<p>Lesson 1</p>	<p>Hydrosphere & Water Distribution</p> <p>How much water is in the world?</p>	<p>13. Construct a model to represent the distribution of freshwater and saltwater on Earth.</p>	<p>Analyzing and Interpreting Data</p> <p>Using Mathematics and Computational Thinking</p>	<p>ESS2.C: The Roles of Water in Earth's Surface Processes</p>	<p>Scale, Proportion, and Quantity</p>
<p>Lesson 2</p>	<p>Mixtures & Solutions</p> <p>How much salt is in the ocean?</p>	<p>3. Conduct investigations to provide evidence that the total weight of matter is conserved during phase changes when substances are heated, cooled, or mixed.</p>	<p>Developing and Using Models</p> <p>Using Mathematics and Computational Thinking</p>	<p>PS1.A: Structure and Properties of Matter</p>	<p>Scale, Proportion, and Quantity</p>
<p>Lesson 3</p>	<p>Groundwater as a Natural Resource</p> <p>When you turn on the faucet, where does the water come from?</p>	<p>13. Construct a model to represent the distribution of freshwater and saltwater on Earth.</p>	<p>Obtaining, Evaluating, and Communicating Information</p> <p>Engaging in Argument from Evidence</p>	<p>ESS2.C: The Roles of Water in Earth's Surface Processes</p>	<p>Patterns</p>
<p>Lesson 4</p>	<p>Water Cycle</p> <p>Can we make it rain?</p>	<p>12. Use a model to represent how any two of Earth's systems (atmosphere, biosphere, geosphere, and hydrosphere) interact and support life.</p>	<p>Developing and Using Models</p> <p>Planning and Carrying Out Investigations</p>	<p>ESS2.A: Earth Materials and Systems</p>	<p>Systems and System Models</p>
<p>Lesson 5</p>	<p>Natural Disasters & Engineering</p> <p>How can you save a town from a hurricane?</p>	<p>14. Obtain and evaluate information to communicate how science-based solutions are being used to protect Earth's natural resources and its environment.</p>	<p>Asking Questions and Defining Problems</p> <p>Obtaining, Evaluating, and Communicating Information</p> <p>Using Mathematics and Computational Thinking</p>	<p>ETS1.A: Defining and Delimiting Engineering Problems</p> <p>ETS1.B: Developing Possible Solutions</p> <p>ETS1.C: Optimizing the Design Solution</p>	<p>Systems and System Models</p>

Earth & Space Patterns (Spaceship Earth)






	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 1 	Day, Night, & Earth's Rotation How fast does the Earth spin?	<i>Foundational for</i> 1I. Analyze data that reveal patterns of daily changes in length and direction of shadows, day and night, phases of the moon, and seasonal appearance of some stars in the night sky.	Developing and Using Models Using Mathematics and Computational Thinking	ESS1.B: Earth and the Solar System	Patterns Cause and Effect
Lesson 2 	Earth's Rotation & Daily Shadow Patterns Who set the first clock?	1I. Analyze data that reveal patterns of daily changes in length and direction of shadows, day and night, phases of the moon, and seasonal appearance of some stars in the night sky.	Planning and Carrying Out Investigations Analyzing and Interpreting Data	ESS1.B: Earth and the Solar System	Patterns Cause and Effect
Lesson 3 	Seasonal Changes & Shadow Length How can the Sun tell you the season?	1I. Analyze data that reveal patterns of daily changes in length and direction of shadows, day and night, phases of the moon, and seasonal appearance of some stars in the night sky.	Analyzing and Interpreting Data Engaging in Argument from Evidence	ESS1.B: Earth and the Solar System	Patterns Cause and Effect
Lesson 4 	Seasonal Patterns & Earth's Orbit Why do the stars change with the seasons?	1I. Analyze data that reveal patterns of daily changes in length and direction of shadows, day and night, phases of the moon, and seasonal appearance of some stars in the night sky.	Developing and Using Models Constructing Explanations and Designing Solutions	ESS1.B: Earth and the Solar System	Patterns Cause and Effect
Lesson 5 	Moon Phases, Lunar Cycle Why does the Moon change shape?	1I. Analyze data that reveal patterns of daily changes in length and direction of shadows, day and night, phases of the moon, and seasonal appearance of some stars in the night sky.	Developing and Using Models Planning and Carrying Out Investigations	ESS1.B: Earth and the Solar System	Patterns Cause and Effect

Stars & Planets (Stars & Planets)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
Lesson 1 	Solar System & Sun Brightness How can the Sun help us explore other planets?	10. Obtain and communicate information to explain why the sun appears to be larger and brighter than other stars.	Developing and Using Models Engaging in Argument from Evidence	ESS1.A: The Universe and its Stars	Scale, Proportion, and Quantity Systems and System Models
Lesson 2 	Gravity Why is gravity different on other planets?	5. Make a claim, supported by evidence, that the gravitational force exerted by Earth pulls objects towards the center of Earth.	Using Mathematics and Computational Thinking Analyzing and Interpreting Data	PS2.B: Types of Interactions	Patterns Cause and Effect
Lesson 3 	Star Brightness & Habitable Planets Could there be life on other planets?	10. Obtain and communicate information to explain why the sun appears to be larger and brighter than other stars.	Obtaining, Evaluating, and Communicating Information Engaging in Argument from Evidence	ESS1.A: The Universe and its Stars	Scale, Proportion, and Quantity

Alabama Specific Standard: 6. Design and conduct a test to modify the speed of an object falling due to gravity. *Example:* constructing a parachute to slow the speed of a falling object.

✓ Chemical Reactions & Properties of Matter (Chemical Magic)

	Topic & Guiding Question	2023 Alabama Course of Study: Science Content Standards	Science & Eng. Practices (SEPs)	Disciplinary Core Ideas (DCIs)	Crosscutting Concepts (CCCs)
 <p>Lesson 1</p> <p>★ Properties of Matter</p> <p>Can you identify a mysterious ingredient?</p>	<p>5-PS1-3. Make observations and measurements to identify materials based on their properties.</p>	<p>Planning and Carrying Out Investigations</p>	<p>PS1.A: Structure and Properties of Matter</p>	<p>Scale, Proportion, & Quantity</p>	
 <p>Lesson 2</p> <p>★ Particle Models</p> <p>Why can you smell things you can't see?</p>	<p>5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen.</p>	<p>Developing and Using Models</p>	<p>PS1.A: Structure and Properties of Matter</p>	<p>Scale, Proportion, & Quantity</p>	
 <p>Lesson 3</p> <p>★ Properties of Matter: Acids</p> <p>How can you tell if acids are hiding in your fridge?</p>	<p>5-PS1-3. Make observations and measurements to identify materials based on their properties.</p>	<p>Planning and Carrying Out Investigations</p>	<p>PS1.A: Structure and Properties of Matter</p>	<p>Scale, Proportion, & Quantity</p>	
 <p>Lesson 4</p> <p>★ Chemical Reactions & Fair Tests</p> <p>Why do some things explode?</p>	<p>5-PS1-4. Conduct an investigation to determine whether the mixing of two or more substances results in new substances.</p>	<p>Planning and Carrying Out Investigations</p>	<p>PS1.B: Chemical Reactions</p>	<p>Cause and Effect</p>	
 <p>Lesson 5</p> <p>Chemical Reactions</p> <p>What do fireworks, rubber, and Silly Putty have in common?</p>	<p>5-PS1-4. Conduct an investigation to determine whether the mixing of two or more substances results in new substances.</p>	<p>Planning and Carrying Out Investigations</p> <p>Constructing Explanations and Designing Solutions</p>	<p>PS1.B: Chemical Reactions</p>	<p>Cause and Effect</p>	

New or Revised Lessons
 ✓ Unit Restructured for the 2025-2026 School Year
 See all [Curriculum Updates](#)