

# 7th Grade Standards

Correlated Standards by Class

Last Updated: 2024

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**IMPORTANT:** Our classes have a base curriculum that can vary based on instructor, and some activities that match the standards below may not be taught. Please let us know if there is a standard below you would like us to focus on, and we will tailor our classes to make sure we address it!

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## Animals in Motion

### Next Generation Science Standards (NGSS)

MS-LS1-4. Use arguments based on empirical evidence and scientific reasoning to support an explanation for how characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants respectively.

MS-LS2-1. Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

MS-LS2-2. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

### Alabama Course of Study (ACOS)

#### **Science**

SC.7.6. Analyze and interpret data to predict how environmental conditions, genetic factors, and resource availability will impact the growth of individual organisms and populations of organisms in an ecosystem. *(CCC: Cause and Effect)*

SC.7.7. Analyze and interpret data to explain how density-independent and density-dependent limiting factors in an ecosystem can lead to shifts in populations. *(CCC: Cause and Effect)*

SC.7.8 Construct an explanation that predicts patterns of interactions between and among organisms in different ecosystems. *(CCC: Cause and Effect)*

# Aquatic Adventures

## **Next Generation Science Standards (NGSS)**

MA-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

## **Alabama Course of Study (ACOS)**

### ***Science***

SC.7.6. Analyze and interpret data to predict how environmental conditions, genetic factors, and resource availability will impact the growth of individual organisms and populations of organisms in an ecosystem. *(CCC: Cause and Effect)*

SC.7.7. Analyze and interpret data to explain how density-independent and density-dependent limiting factors in an ecosystem can lead to shifts in populations. *(CCC: Cause and Effect)*

### ***Social Studies***

SS.7.9. Explain how human actions modify the physical environment within and between places, including how human-induced changes affect the environment.

## **Mississippi College- and Career- Readiness Standards**

### ***Science***

L.7.3. Students will demonstrate an understanding of the importance that matter cycles between living and nonliving parts of the ecosystem to sustain life on Earth.

L.7.3.1. Analyze diagrams to provide evidence of the importance of the cycling of water, oxygen, carbon, and nitrogen through ecosystems to organisms.

L.7.3.4. Explain how disruptions in cycles (e.g. water, oxygen, carbon, and nitrogen) affect biodiversity and ecosystem services (e.g. water, food, and medications) which are needed to sustain human life on Earth.

## Art in Nature

### Alabama Course of Study (ACOS)

#### ***Arts Education - Visual Arts***

10. Analyze how the method of display and the location of an artwork influence how it is perceived and valued.

### Mississippi College- and Career- Readiness Standards

#### ***Arts Learning Standards - Visual Arts***

Cr2. Organize and develop artistic ideas and work.

3.7.a. Apply visual organizational strategies to design and produce a work of art, design, or media that clearly communicates information or ideas.

Re7. Perceive and analyze artistic work.

1.7.a. Explain how the method of display, the location, and the experience of an artwork influence how it is perceived and valued.

Re8. Interpret intent and meaning in artistic work.

1.7.a. Interpret art by analyzing art-making approaches, the characteristics of form and structure, relevant contextual information, subject matter, and use of media to identify ideas and mood conveyed.

## Down to Earth

### **Next Generation Science Standards (NGSS)**

MS-ESS2-1. Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.

MS-ESS2-2. Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

MS-ESS3-4. Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

MS-LS1-6. Construct a scientific explanation based on evidence for the role of photosynthesis in the cycling of matter and flow of energy into and out of organisms.

MS-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.

### **Alabama Course of Study (ACOS)**

#### ***Science***

SC.7.5. Construct an explanation of how the cycling of matter between abiotic and biotic parts of ecosystems demonstrates the flow of energy and the conservation of matter, including the carbon, nitrogen, and water cycles. *(CCC: Energy and Matter)*

SC.7.7. Analyze and interpret data to explain how density-independent and density-dependent limiting factors in an ecosystem can lead to shifts in populations. *(CCC: Cause and Effect)*

#### ***Social Studies***

SS.7.3. Compare geographic patterns in the environment that result from processes within the atmosphere, biosphere, lithosphere, and hydrosphere of Earth's physical systems.

3c. Describing characteristics and physical processes that influence the spatial distribution and biomes on Earth's surface.

3e. Comparing geographic issues in different regions that result from human and natural processes.

SS.7.9. Explain how human actions modify the physical environment within and between places, including how human-induced changes affect the environment.

SS.7.11. Explain the cultural concept of natural resources and changes in spatial distribution, quantity, and quality through time and by location.

11a. Evaluating various cultural viewpoints regarding the use or value of natural resources.

11b. Identifying issues regarding depletion of nonrenewable resources and the sustainability of renewable resources.

## Focus on Fungi

### **Next Generation Science Standards (NGSS)**

MS-LS2-1. Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

MS-LS2-2. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

MS-LS2-3. Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

### **Alabama Course of Study (ACOS)**

#### ***Science***

SC.7.6. Analyze and interpret data to predict how environmental conditions, genetic factors, and resource availability will impact the growth of individual organisms and populations of organisms in an ecosystem. *(CCC: Cause and Effect)*

SC.7.8 Construct an explanation that predicts patterns of interactions between and among organisms in different ecosystems. *(CCC: Cause and Effect)*

## Food for Thought

### **Next Generation Science Standards (NGSS)**

MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

MS-PS1-3. Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.

## **Hop, Slither, Slide & Birds of a Feather**

### **Next Generation Science Standards (NGSS)**

MS-LS2-2. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

### **Alabama Course of Study (ACOS)**

SC.7.6. Analyze and interpret data to predict how environmental conditions, genetic factors, and resource availability will impact the growth of individual organisms and populations of organisms in an ecosystem. *(CCC: Cause and Effect)*

SC.7.8 Construct an explanation that predicts patterns of interactions between and among organisms in different ecosystems. *(CCC: Cause and Effect)*

## **Invention Convention**

### **Next Generation Science Standards (NGSS)**

MS-ETS1-2. Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.



## McDowell Woods

### **Next Generation Science Standards (NGSS)**

MS-ESS3-4. Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

### **Alabama Course of Study (ACOS)**

#### ***Science***

SC.7.8 Construct an explanation that predicts patterns of interactions between and among organisms in different ecosystems. (*CCC: Cause and Effect*)

SC.7.9. Design a solution to maintain biodiversity and ecosystem services in a given scenario. (*CCC: Cause and Effect*)

#### ***Social Studies***

SS.7.3. Compare geographic patterns in the environment that result from processes within the atmosphere, biosphere, lithosphere, and hydrosphere.

3e. Comparing geographic issues in different regions that result from human and natural processes.

SS.7.11. Explain the cultural concept of natural resources and changes in spatial distribution, quantity, and quality through time and by location.

11a. Evaluating various cultural viewpoints regarding the use or value of natural resources.

11b. Identifying issues regarding depletion of nonrenewable resources and the sustainability of renewable resources.

## Meet a Map

### **Alabama Course of Study (ACOS)**

SS.7.1. Describe the world in spatial terms using maps and other geographic representations, tools, and technologies.

1a. Explaining the use of map essentials, including type, projections, scale, legend, distance, direction, grid, and symbols.

1b. Identifying geospatial technologies to acquire, process, and report information from a spatial perspective.

SS.7.2. Determine how regions are used to describe the organization of Earth's surface.

2a. Identifying physical and human features used as criteria for mapping formal, functional, and perceptual regions.

## Navigation

### **Alabama Course of Study (ACOS)**

SS.7.1. Describe the world in spatial terms using maps and other geographic representations, tools, and technologies.

1b. Identifying geospatial technologies to acquire, process, and report information from a spatial perspective.

## **Our Galaxy**

### **Next Generation Science Standards (NGSS)**

MS-PS2-4. Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.

MS-ESS1-2. Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system.

MS-ESS1-3. Analyze and interpret data to determine scale properties of objects in the solar system.

### **Alabama Course of Study (ACOS)**

#### ***Arts Education - Theater***

5. Demonstrate mutual respect for self and others and their roles in preparing or devising drama/theatre work.

13. Participate in rehearsals for a drama/theatre work that will be shared with an audience.

### **Mississippi College- and Career- Readiness Standards**

#### ***Arts Learning Standards - Theatre***

Cr2. Organize and develop artistic ideas and work.

1.7.b. Demonstrate mutual respect for self and others and their roles in preparing or devising drama/theatre work.

Pr6. Convey meaning through the presentation of artistic work.

13. Participate in rehearsals for a drama/theatre work that will be shared with an audience.

# People of the Earth

## Alabama Course of Study (ACOS)

### ***Science***

SC.7.8 Construct an explanation that predicts patterns of interactions between and among organisms in different ecosystems. (*CCC: Cause and Effect*)

### ***Social Studies - Geography***

SS.7.1. Describe the world in spatial terms using maps and other geographic representations, tools, and technologies.

7c. Utilizing maps to explain relationships and environments among people and places, including trade patterns, governmental alliances, and immigration patterns

7e. Categorizing the geographical organization of people, places, and environments using spatial models.

SS.7.8. Determine political, military, cultural, and economic forces that contribute to cooperation and conflict among people.

8a. Identifying political boundaries based on physical and human systems.

8c. Describing the eruption of territorial conflicts over borders, resources, land use, and ethnic and nationalistic identity.

SS.7.11. Explain the cultural concept of natural resources and changes in spatial distribution, quantity, and quality through time and by location.

11a. Evaluating various cultural viewpoints regarding the use or value of natural resources.

### ***Social Studies - Civics***

SS.7.7. Determine how people organize economic systems to address basic economic questions regarding which goods and services will be produced, how they will be distributed, and who will consume them.

## Mississippi College- and Career-Readiness Standards

### ***Social Studies - Compacted***

7C.8. Interpret the geographical, social, and political causes, effects, and challenges of westward expansion.

8.6. Examine the motivations and consequences of the Indian Removal Act.

## Rock Query

### **Next Generation Science Standards (NGSS)**

MS-ESS1-4. Construct a scientific explanation based on evidence from rock strata for how the geologic time scale is used to organize Earth's 4.6-billion-year-old history.

MS-ESS2-1. Develop a model to describe the cycling of Earth's materials and the flow of energy that drives this process.

MS-ESS2-2. Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

MS-LS2-2. Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

MS-LS2-3. Develop a model to describe the cycling of matter and flow of energy among living and non-living parts of an ecosystem.

MS-PS1-3. Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.

### **Alabama Course of Study (ACOS)**

#### ***Science***

SC.7.8 Construct an explanation that predicts patterns of interactions between and among organisms in different ecosystems. (*CCC: Cause and Effect*)

#### ***Social Studies***

SS.7.3. Compare geographic patterns in the environment that result from processes within the atmosphere, biosphere, lithosphere, and hydrosphere of Earth's physical systems.

3b. Explaining processes that shape the physical environment, including long-range effects of extreme weather phenomena.

3c. Describing characteristics and physical processes that influence the spatial distribution and biomes on Earth's surface.

3d. Comparing how ecosystems vary from place to place and over time.

## Survival Skills

### Alabama Course of Study (ACOS)

#### *Social Studies*

SS.7.10. Explain how human systems develop in response to physical environmental conditions.  
10b. Differentiating ways people prepare for and respond to natural hazards, including building storm shelters, conducting fire and tornado drills, and establishing building codes for construction.