

# Aquatic Adventures

Correlated Standards by Grade

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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## Next Generation Science Standards (NGSS)

### 4th Grade

4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

### 5th Grade

5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.

5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

### Middle School (6-8)

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)

### 4th Grade

#### **Science**

SC.4.8. Make a claim, using evidence, that the functions of both internal and external structure of plants and animals (including humans) support growth, survival, and behavior. *(CCC: Structures and Function)*

SC.4.9. Carry out investigations to support a claim that different animals receive information through their senses, process that information, and respond in various ways. *(CCC: Systems and System Models)*

### 5th Grade

#### **Science**

SC.5.12. Use a model to represent how any two of Earth's systems (atmosphere, biosphere, geosphere, and hydrosphere) interact and support life. *(CCC: Systems and System Models)*

SC.5.14. Obtain and evaluate information to communicate how science-based solutions are being used to protect Earth's natural resources and its environment. *(CCC: Stability and Change)*

### 6th Grade

#### **Science**

SC.6.11. Obtain, evaluate, and communicate information concerning the relationships between human activities and natural processes and how those relationships affect Earth's systems, including human population growth and its impact on the global environment over time. *(CCC: Cause and Effect)*

SC.6.11a. Define problems and design solutions to monitor and mitigate human impact on the environment. *(CCC: Cause and Effect)*

### 7th Grade

#### **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

### 4th Grade

#### *Science*

L.4.2. Students will demonstrate an understanding of life cycles, including familiar plants and animals (e.g., reptiles, amphibians, or birds).

E.4.9C. Students will demonstrate an understanding of how natural processes and human activities affect the features of Earth's landforms and oceans.

9C.4. Research and explain how systems (i.e. the atmosphere, geosphere, and/or biosphere) interact and support life in the biosphere.

### 5th Grade

#### *Science*

E.5.10. Students will demonstrate an understanding of the effects of human interaction with Earth and how Earth's natural resources can be protected and conserved.

10.1. Collect and organize scientific ideas that individuals and communities can use to conserve Earth's natural resources and systems.

### 6th Grade

#### *Science*

L.6.3. Students will demonstrate an understanding of the relationships among survival, environmental changes, and diversity as they relate to the interactions of organisms, populations, and the environment.

3.1. Use scientific reasoning to explain differences between biotic and abiotic factors that demonstrate what living organisms need to survive.

3.3. Analyze cause and effect relationships to explore how changes in the physical environment (limiting factors, natural disasters) can lead to population changes within an ecosystem.

#### *Social Studies*

6.2. Identify geographic patterns in the environment that result from the processes of Earth's physical systems.

2.1. Define atmosphere, biosphere, lithosphere, and hydrosphere.

2.4. Investigate ways humans change their environment.

### 7th Grade

#### *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.