McDowell Woods

Correlated Standards by Grade

NGSS=Next Generation Science Standards, ACOS=Alabama Course of Study, GPS=Georgia Performance Standards, GSE=Georgia Standards of Excellence, MSF=Mississippi Science Framework, TASS=Tennessee Academic Standards for Science

Grade 5

NGSS

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.
3-5ETS1-1. Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
3-5-ETS1-2. Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.

ACOS

SC.5.14. Use a model to represent how any two systems, specifically the atmosphere, biosphere, geosphere, and/or hydrosphere, interact and support life.
SC.5.16. Collect and organize scientific ideas that individuals and communities can use to protect Earth's natural resources and its environment.

MFS

5.ES.4.D. Describe changes caused by humans on the environment and natural resources and cite evidence from research of ways to conserve natural resources in the United States, including Mississippi.
5.ES.4.G. Conclude that the supply of many Earth resources is limited and critique a plan to extend the use of Earth's resources.

TASS

GSE

S5E1. Obtain, evaluate, and communicate information to identify surface features on the Earth caused by constructive and/or destructive processes.

GPS

S5CS5. Students will communicate scientific ideas and activities clearly.

Middle School

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.

ACOS

SC.6.16. Implement scientific principles to design processes for monitoring and minimizing human impact on the environment.

MFS

7.ESS.4.D. Conclude why factors, such as lack of resources and climate can limit the growth of populations in specific niches in the ecosystem.
8.ESS.4.D. Research the importance of the conservation of renewable and nonrenewable resources, including Mississippi, and justify methods that might be useful in decreasing the human impact on global warming.

TASS

6.ESS3.3. Assess the impacts of human activities on the biosphere including conservation, habitat management, species endangerment, and extinction.
6.LS4.2. Design a possible solution for maintaining biodiversity of ecosystems while still providing necessary human resources without disrupting environmental equilibrium.
6.ETS1.1. Evaluate design constraints on solutions for maintaining ecosystems and biodiversity.
6.ESS3.1.Differentiate between renewable and nonrenewable resources by asking questions about their availability and sustainability.
6.ESS3.2. Investigate and compare existing and developing technologies that utilize renewable and alternative energy resources.

GSE

GPS

S6-8CS6. Students will communicate scientific ideas and activities clearly.

<u>High School</u>

NGSS

HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.

ACOS

ES.HS.6. Obtain, evaluate, and communicate information to describe how human activity may affect biodiversity and genetic variation of organisms, including threatened and endangered species.
ES.HS.1 Investigate and analyze the use of nonrenewable energy sources and propose solutions for their impact on the environment.
ES.HS.4. Engage in argument from evidence to evaluate how biological or physical changes within ecosystems affect the number and types of organisms, and that changing conditions may result in a new or altered ecosystem.
ES.HS.14. Analyze cost-benefit ratios of competing solutions for developing, conserving, managing, recycling, and reusing energy and mineral resources to minimize impacts in natural systems.

MSF

HS.Bot.4.D. Research factors that might influence or alter plant stability and propose actions that may reduce the negative impacts of human activity.
HS.ESS.3. Discuss the impact of human activities on the environment, conservation activities, and efforts to maintain and restore ecosystems.

TASS

GSE

GPS

SG5. Students will apply geologic knowledge to the use of resources in the Earth and the control of human impacts on Earth's systems.

SCSh3. Students will identify and investigate problems scientifically.