



SCIENCE

**NATIONAL
GEOGRAPHY
&
OKLAHOMA
ACADEMIC
STANDARDS**

**SEE HOW GEOGRAPHY IS RELEVANT TO
THE OKLAHOMA ACADEMIC STANDARDS
FOR SCIENCE!**

1: HOW TO USE MAPS AND OTHER GEOGRAPHIC REPRESENTATIONS, GEOSPATIAL TECHNOLOGIES, AND SPATIAL THINKING TO UNDERSTAND AND COMMUNICATE INFORMATION

4.ESS2.2 Analyze and interpret data from maps to describe patterns of Earth's features.

B.LS2.1 Use mathematical and/or computational representations to support explanations of factors that affect carrying capacities of ecosystems at different scales.

4: THE PHYSICAL AND HUMAN CHARACTERISTICS OF PLACES

PK.S.4 Share noticings and wonderings about the physical and natural world.

PK.S.6 Engage in investigations based on curiosity and wondering about the physical and natural world.

7: THE PHYSICAL PROCESSES THAT SHAPE THE PATTERNS OF EARTH'S SURFACE

K.ESS.2.1 Use and share observations of local weather conditions to describe patterns over time.

2.ESS2.1 Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land.

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

8.LS1.5 Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

CH.PS2.6 Communicate scientific and technical information about why the molecular level structure of designed materials determines how the material functions.

ES.ESS1.6 Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of changes in Earth's formation and early history.

8: THE CHARACTERISTICS AND SPATIAL DISTRIBUTION OF ECOSYSTEMS AND BIOMES ON EARTH'S SURFACE

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.

2.LS4.1 Make observations of plants and animals to compare the diversity of life in different habitats.

3.LS3.2 Use evidence to support the explanation that traits can be influenced by the environment.

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

8.LS1.5 Construct a scientific explanation based on evidence for how environmental and genetic factors influence the growth of organisms.

B.LS2.1 Use mathematical and/or computational representations to support explanations of factors that affect carrying capacities of ecosystems at different scales.

9: THE CHARACTERISTICS, DISTRIBUTION, AND MIGRATION OF HUMAN POPULATIONS ON EARTH'S SURFACE

K.ESS2.2 Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.

[EN/ES].ESS3.1 Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate affect human activity.

11: THE PATTERNS AND NETWORKS OF ECONOMIC INTERDEPENDENCE ON EARTH'S SURFACE

PS.PS4.2 Evaluate questions about the advantages and disadvantages of using a digital transmission and storage of information.

CH.PS2.6 Communicate scientific and technical information about why the molecular level structure of designed materials determines how the material functions.

12: THE PROCESSES, PATTERNS, AND FUNCTIONS OF HUMAN SETTLEMENT

3.LS4.4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

PH.PS3.3 Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.

13: HOW THE FORCES OF COOPERATION AND CONFLICT AMONG PEOPLE INFLUENCE THE DIVISION AND CONTROL OF EARTH'S SURFACE

PH.PS3.3 Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.

14: HOW HUMAN ACTIONS MODIFY THE PHYSICAL ENVIRONMENT

5.LS2.2 Use models to explain factors that upset the stability of local ecosystems.

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

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

[EN/ES].ESS3.1 Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate affect human activity.

15: HOW PHYSICAL SYSTEMS AFFECT HUMAN SYSTEMS

3.LS4.4 Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

4.ESS3.2 Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans.

5.LS2.2 Use models to explain factors that upset the stability of local ecosystems.

8.LS4.1 Analyze and interpret data to identify patterns within the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth.

PH.PS3.3 Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.

16: THE CHANGES THAT OCCUR IN THE MEANING, USE, DISTRIBUTION, AND IMPORTANCE OF RESOURCES

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

CH.PS2.6 Communicate scientific and technical information about why the molecular level structure of designed materials determines how the material functions.

PH.PS3.3 Design, build, and refine a device that works within given constraints to convert one form of energy into another form of energy.

[EN/ES].ESS3.1 Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate affect human activity.

17: HOW TO APPLY GEOGRAPHY TO INTERPRET THE PAST

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

8.LS4.1 Analyze and interpret data to identify patterns within the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth.

ES.ESS1.6 Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of changes in Earth's formation and early history.

18: HOW TO APPLY GEOGRAPHY TO INTERPRET THE PRESENT AND PLAN FOR THE FUTURE

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

6.ESS3.2 Analyze and interpret data on natural hazards to forecast future catastrophic events and inform the development of technologies to mitigate their effects.

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

[EN/ES].ESS3.1 Construct an explanation based on evidence for how the availability of natural resources, occurrence of natural hazards, and changes in climate affect human activity.