



Curriculum Connection: National Parks Adventure

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Film

<https://www.thehenryford.org/visit/giant-screen-experience/national-park-adventure/>

After viewing *National Parks Adventure* and with some guidance from teachers, students should be able to:

Next Generation Science Standards

- 2-ESS1-1 Use information from several sources to provide evidence that Earth events can occur quickly or slowly.
- MS-ESS2-2 Construct an explanation based on evidence for how geoscience processes have changed Earth's surface at varying time and spatial scales.

Common Core State Standards in English Language Arts

- SL.1.2 Ask and answer questions about key details in a text read aloud or information presented orally or through other media.
- SL.2.2 Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.
- SL.3.2 Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
- SL.4.2 Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
- SL.5.2 Summarize a written text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.
- SL.6.2 Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.
- SL.7.2 Analyze the main ideas and supporting details presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how the ideas clarify a topic, text, or issue under study.

Michigan Social Studies Grade Level Content Expectations

- 3 - G5.0.1 Locate natural resources in Michigan and explain the consequences of their use.
- 3 - G5.0.2 Describe how people adapt to, use, and modify the natural resources of Michigan. (H)
- 4 - H3.0.8 Describe past and current threats to Michigan's natural resources; describe how Michigan worked in the past and continues to work today to protect its natural resources. (G, C, E)
- 4 - G1.0.4 Use geographic tools and technologies, stories, songs, and pictures to answer geographic questions about the United States.
- 4 - G2.0.2 Compare human and physical characteristics of a region to which Michigan belongs (e.g., Great Lakes, Midwest) with those of another region in the United States.
- 4 - G5.0.1 Assess the positive and negative effects of human activities on the physical environment of the United States.
- 4 - P3.1.1 Identify public issues in the United States that influence the daily lives of its citizens.

4 - P3.1.3 Give examples of how conflicts over core democratic values lead people to differ on resolutions to a public policy issue in the United States.

6/7 - G1.2.4 Use observations from air photos, photographs (print and CD), films (VCR and DVD) as the basis for answering geographic questions about the human and physical characteristics of places and regions.

6/7 - G1.3.1 Use the fundamental themes of geography (location, place, human environment interaction, movement, region) to describe regions or places on earth.

6/7 - G2.1.1 Describe the landform features and the climate of the region (within the Western or Eastern Hemispheres) under study.

9-12 USHG 6.3.2 Causes and Consequences of Progressive Reform - Analyze the causes, consequences, and limitations of Progressive reform in the following areas

- role of reform organizations, movements and individuals in promoting change (e.g., conservation movement (*National Geography Standard 14, p. 212*)

Educator Resources

<http://nationalparksadventure.com/educators/>

Standards are Next Generation Science Standards unless otherwise stated.

LESSON 1: CONSERVATION IS CRITICAL (Cross-Curricular Plan for K-5)

LS4.D Biodiversity and Humans

ESS3.C Human Impacts on Earth Systems

LS1.C Organization for Matter and Energy Flow in Organisms

ESS3.A Natural Resources

LS2.C Ecosystem Dynamics, Functioning, and Resilience

LESSON 2: SUMMERTIME SHADES (K-2)

K-PS3-2 Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.

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.

Taking it further

K-PS3-1 Make observations to determine the effect of sunlight 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.

K-PS3-2 Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.

LESSON 3: ANIMAL ADAPTATIONS (K-2)

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.

Taking it further

CCSS.ELA-LITERACY.W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

LESSON 4: RIVER RUN (K-2)

2-ESS2-1. Compare multiple solutions designed to slow or prevent wind/water erosion.

Taking it further

K-ESS3-3 Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.

LESSON 5: SURVIVING SOLO (3-5)

3-PS2-4 Define a simple design problem that can be solved by applying scientific ideas about magnets.

Taking It Further

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.

5-ESS1-2 Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.

LESSON 6: LAYERS OVER TIME (3-5)

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.

Taking It Further

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.

LESSON 7: THROUGH THE CHAIN (3-5)

5-LS2-1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

Taking It Further

CCSS.MATH.CONTENT.2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems¹ using information presented in a bar graph.

CCSS.MATH.CONTENT.3.MD.B.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs.

CCSS.MATH.CONTENT.5.MD.B.2 Make a line plot to display a data set of measurements in fractions of a unit ($1/2, 1/4, 1/8$). Use operations on fractions for this grade to solve problems involving information presented in line plots.

CCSS.MATH.CONTENT.6.RP.A.1 Understand the concept of a ratio and use ratio language to describe a ratio relationship between two quantities.

LS4.D Biodiversity and Humans

LS2.C Ecosystems Dynamics, Functioning and Resilience

LESSON 8: CAPTURING CONNECTIONS (6-8)

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

Taking It Further

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

LESSON 9: EXPLOSIVE VOLCANO (6-8)

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

LESSON 10: HOW HIGH CAN YOU CLIMB SAFELY? (6-8)

MS-PS2-2 Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.

Taking It Further

MS-ETS1 Engineering Design