

Mesa Verde & the Anasazi

Instructor Guide

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Mesa Verde & the Anasazi Instructor Guide Credits:

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Instructor Guidelines

The Mesa Verde & the Anasazi learning node is designed for use at the secondary level to provide learners with a self-paced virtual reality experience. Learners are able to explore an area they may have never experienced with the presentation of panoramic views that can be enhanced with a head mounted display and motion sensing tracker. Embedded fact files on various attributes of the Mesa Verde environment as well as the Anasazi history and culture, enable the user to interact with the software.

The accompanying study questions and problem-based projects can be used to guide student learning with the software. These activities support the learning objectives and the Arkansas State Standards outlined in this Instructor Guide. The problem-based learning scenarios provide the learner with opportunities to apply inductive and deductive reasoning, cause and effect and creative thinking strategies. The question format is based on Bloom taxonomy of intellectual behaviors. The six levels allow the learner to begin with simple recall of facts, as the lowest level, and move towards more complex mental levels such as synthesis and evaluation.

Mesa Verde Background Information

Mesa Verde, Spanish for green table, is located in the Colorado section of the four corners region of the southwestern United States. The Mesa Verde National Park holds many stories of the prehistoric people called the Anasazi. These ancient people probably lived at Mesa Verde between A.D. 550 to A.D. 1300. Their elaborate dwellings and the array of objects left behind have helped archeologists learn a great deal about their culture. These artifacts illustrate a people driven by technology and its improvement. This is clearly evidenced through advancements in architecture, weapons, tools, pottery and basketry. The preservation of cultural heritage, in addition to some of the best Anasazi ruins in the world, make the Mesa Verde National Park an ideal setting for educational study.

Instructional Materials

Mesa Verde & the Anasazi interactive software

Educational Reality System (ERS) hardware system including head mounted display with motion sensing tracker, flying mouse input device, keyboard & standard mouse, flat panel monitor, surround sound speaker system

Mesa Verde & the Anasazi Instructor Guide and project copying masters

Guidelines for Use

The Mesa Verde & the Anasazi learning node is designed for self-paced use within the classroom or computer lab setting. There are a number of different ways to organize use of the software. One or more students may use the software at a time. Although there is only one head mount display per workstation, the same image appears on the monitor. Therefore, students can take turns using the head mount and work in teams. Another option is to have students work independently with the software, and in groups for the accompanying projects. The instructor can develop a sign-up sheet for scheduling rotation of the students. Students should be allowed some exploration time to get used to the structure of the learning node and feel of the head mount, before they are required to complete assignments. The copying masters found in the back of this guide are designed to accompany learning at each level of Bloom's taxonomy.

Arkansas State Standards for Grades 9–12

The Mesa Verde & the Anasazi learning node addresses the following Arkansas State Standards for grades 9–12.

Social Studies

Strand 1: Time, Continuity and Change

TCC.1.4. Link historical events region to region along timelines.

TCC.1.6. Analyze and evaluate the history, causes, consequences, and possible solutions to persisting issues, such as health, security, resource allocation, economic development, and environmental quality.

Strand 2: People, Places and Environments

PPE.1.2. Evaluate the effects of science and technology on individuals, groups and organizations.

PPE.2.1. Formulate connections of individuals, groups and organizations to the physical environment.

PPE.2.2. Question and appraise how events in all cultures are influenced by physical and human geographic factors.

PPE.2.5. Investigate ways that natural or man-made environments interact with culture by using a variety of experiences such as field studies, interactive technologies, works of literature and the arts

Strand 3: Production, Distribution and Consumption

PCD.1.4. Identify present day choices and illustrate that these choices have future consequences.

Strand 5: Social Science Processes and Skills

SSPS1.2. Develop and enhance observation, questioning and interpretive skills throughout the social sciences

SSPS1.3. Develop and enhance critical analysis skills, such as cause and effect and inductive and deductive reasoning throughout the social sciences.

SSPS1.4. Employ creative thinking skills throughout the social sciences.

SSPS.2.5. Draw inferences.

SSPS.2.6. Use appropriate tools, such as globes, maps, statistical data, primary historical sources, relevant media resources, interactive technologies, and field studies, etc.

Science

Strand 2: Life Science Systems

LS.2.11. Investigate and formulate solutions to problems resulting from human impact on the environment.

Strand 3: Earth / Space Systems

ES.2.9. Evaluate the physical interactions of water with the Earth (glaciers, erosion and leaching)

Arkansas
State
Standards for
Grades 9–12
(continued)

Language Arts

Strand 1: Writing

W .1.4. Synthesize information from a variety of sources, such as traditional print, word processors, spreadsheet, graphic software, Internet, etc.

W .1.5. Write in response to new learning in a variety of forms.

W .1.6. Write to persuade, to defend, to inform, and to explain from thoughts, experience and research.

W .1.7. Write to show knowledge of cultural diversity.

W .1.12. Gather research data from a variety of traditional and electronic sources to formulate, substantiate, or refute opinions or theories.

W .1.18. Share writing through peer/teacher feedback sessions, exhibitions, classroom displays, multimedia publications, and contests

W .2.2. Edit writing for appropriate mechanics and usage.

W .2.5. Synthesize research data into an original work and present that work in a developmentally appropriate manner, such as reports, annotated bibliographies, research papers, multimedia presentations, etc.

Strand 2: Reading

R.1.10. Gather research data from a variety of traditional and electronic sources to formulate, substantiate, or refute opinions or theories.

R.1.16. Apply critical thinking skills in interpreting text, e.g. inferencing, comparing/contrasting, analyzing, evaluating.

R.2.5. Use electronic media for language arts purposes.

R.2.6. Use the Internet appropriately for information gathering and problem-solving.

Strand 3: Listening, Speaking and Viewing

LSV.1.2. Express and logically defend one's ideas.

LSV.1.6. Use graphics and supporting audio-visual media.

LSV.1.13. Evaluate information from a variety of sources.

Instructional Objectives

After exploring the Mesa Verde & the Anasazi learning node and completing the related activities, students should be able to complete assignments associated with the following learning objectives.

Objectives at the Knowledge Level of Bloom s Taxonomy:

The learner will list environmental characteristics of the Mesa Verde environment.

The learner will label the parts of a pit house and a kiva.

The learner will match Anasazi time periods with the form of architecture present at that time.

Objectives at the Comprehension Level of Bloom s Taxonomy:

The learner will describe how environmental conditions affected the Anasazi.

The learner will explain how Anasazi artifacts provide information about how the Anasazi lived.

The learner will explain how the Anasazi used plants and animals in daily life.

The learner will describe elements of Anasazi culture.

Objectives at the Application Level of Bloom s Taxonomy:

The learner will develop a biographical report of what life would have been like for an Anasazi man, woman or child.

Objectives at the Analysis Level of Bloom s Taxonomy:

The learner will explain how the present topography of the Mesa Verde region was formed over time.

The learner will explain the evolution of technology spanning the time of the Anasazi.

Objectives at the Synthesis Level of Bloom s Taxonomy:

The learner will develop a design proposal for submission of an Anasazi exhibit into a museum.

The learner will compose a written formulation of what future archeologists would learn from remnants of present day society.

Objectives at the Evaluation Level of Bloom s Taxonomy:

The learner will evaluate the consequences of and make recommendations for issues of overpopulation and resource depletion.