

Mesa Verde National Park: The History, People, and Future of an Iconic American National Park

A partnership among the History Colorado State Historical Fund, Mesa Verde National Park and Crow Canyon Archaeological Center, the Mesa Verde Curriculum Project provides a wealth of resources, lesson plans, activities and itineraries for students, teachers and families exploring the park virtually or in person. The goal of this student-centered, standards-aligned curriculum is to enhance, enrich and support active learning about this remarkable national park.

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Unit Key Words and Topics: Human interactions with ecosystems, stakeholders, natural resource management and use, cultural resource management and use, southwestern American history, National Park Service (NPS) and Mesa Verde National Park history, careers in the parks.

Unit Essential Questions: Who are the stakeholders and caretakers of Mesa Verde National Park? What were their historical and current roles? How do people care for the cultural and natural resources of Mesa Verde National Park?

Unit Overview: In this unit, students explore the challenges of managing a complex National Park and UNESCO World Heritage Site from the perspectives of diverse park stakeholders (archaeologists, Pueblo people, Ute Mountain Ute tribal members, tourism bureaus, park managers, wildlife biologists, etc.). Students prepare for their field trip by examining park maps and itineraries and researching the goals, expertise and perspectives of specific stakeholders. At the park, students conduct “site studies” at each location they visit, analyzing the site from the real-world perspective of their stakeholders. After the field trip, students create a brochure about their stakeholders’ roles and impact at the park. Students evaluate a series of proposed park projects from the perspective of their stakeholder and write position statements supporting, modifying or rejecting proposed projects. These evaluations culminate in whole-class debates on park projects. Additional extension activities, field journal assignments, and document-based questions (DBQs) are included in the unit.

Lesson Overview

Pre-Visit Lessons:

1. “Who are Mesa Verde’s Stakeholders?” *Students define and discuss the concept of stakeholders and brainstorm specific Mesa Verde National Park stakeholders. Students are assigned to specific “stakeholder teams” to focus their research throughout the unit. Students work in groups to research the history of Mesa Verde and the role of their stakeholders in the creation and management of the park.*
2. “Here We Go ... A Park Preview.” *Students consult park maps, preview their field trip itinerary and view a short video about visiting Ancestral Pueblo sites to prepare for their trip.*

Field Trip Lessons:

3. “Stakeholder Site Studies.” *Students use “site study” worksheets to explore each site they visit from the perspective of their stakeholder.*
4. “Field Trip Extensions.” *Additional activities for classes with more time and flexibility.*

Post-Visit Lessons:

5. *“Stakeholder Brochures.” Students synthesize research to create informational brochures about their stakeholders’ roles, responsibilities and impacts at Mesa Verde.*
6. *“Proposed Park Projects.” Students research proposed park projects and write position statements arguing in support or against the projects from the perspective of their stakeholders. Students participate in debates about the proposed projects.*

Field Notebook:

Customizable writing and research prompts for students at all stages of the curriculum including DBQs.

Background Information and Resources

Mesa Verde National Park is unique among the National Parks of the United States because of its conservation of *both* cultural and natural resources. It is a UNESCO World Heritage Site, designated because of its distinct resources, histories and relationships with modern-day people.

Because of its unique cultural and natural resources, the park’s management and stakeholders are diverse. There are 26 associated Native American tribes that have historic and contemporary relationships with the park. Mesa Verde tourism contributes significantly to the economies of surrounding areas. Park management includes departments that oversee a wide range of interests and processes within the park. These include visitor services, invasive species management, wildfire management, archaeological research, cultural resource preservation and others.

This curricular unit focuses on the park’s diverse stakeholders and management challenges. It examines the park through a contemporary, complex, and dynamic lens as students work to understand the viewpoints and responsibilities of various stakeholders and how they approach decision-making in the park.

UNESCO World Heritage Sites:

The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity. This is embodied in an international treaty called the Convention concerning the Protection of the World Cultural and Natural Heritage, adopted by UNESCO in 1972.

National Park Service Mission:

The National Park Service preserves unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.

Mesa Verde National Park Mission:

- Preserving and protecting from injury and spoliation sites, artifacts and other works of Ancestral Pueblo peoples;
- Protecting wildlife, birds, and other natural resources from willful destruction, disturbance and removal;
- Managing and protecting the pristine character of designated wilderness on 8,100 acres;
- Provide for research to increase knowledge and aid in the advancement of archeological science;
- Maintaining American Indian rights annuities and benefits that are entitled by law, treaty and executive orders; and
- Protecting the scenery of Point Lookout.

Mesa Verde National Park Curriculum Project

Blended curriculum for grades 3–8

Grade 7-8 Background Information and Resources

Additional Resources

Mesa Verde National Park website: <http://www.nps.gov/meve/index.htm>

Within this site, the links to “History & Culture”

(<http://www.nps.gov/meve/learn/historyculture/index.htm>) and Park Management

(<http://www.nps.gov/meve/learn/management/index.htm>) are especially relevant for this grade 7-8

unit. Within the “Management” page, there are a number of resources including Park Statistics,

Laws & Policies, and Fire Management. In addition, the National Park Service compiles park

documents on current plans or projects. Mesa Verde’s are listed at:

<https://parkplanning.nps.gov/parkHome.cfm?parkID=79>.

UNESCO’s Mesa Verde website: <http://whc.unesco.org/en/list/27>

As a designated UNESCO World Heritage Site, this page describes park history and global significance.

Crow Canyon Archaeological Center’s Educational Resources:

<http://www.crowcanyon.org/index.php/classroom-resources>

Crow Canyon Archaeological Center has some great classroom and online resources for students.

“Pueblo Indian History for Kids” and “Peoples of the Mesa Verde Region” are terrific introductions to the landscape, people, and history of this remarkable region.

Visit Mesa Verde website: <http://www.visitmesaverde.com/>

This site is managed by the hospitality company, Aramark, and includes park history and tourism information as well as park lodging information. This is a great resource for students to explore how the park is presented to tourists from the perspective of the tourism industry.

Field Trip Itineraries

This unit challenges students to experience the park from a different perspective, from one of its stakeholders. Students must consider how stakeholders perceive, protect, and share the park's resources. It is recommended that students visit at least two sites in the park. Interpretive staff encountered during the field trip can be resources for student research—students should feel free to engage park staff if they are available with questions.

Though it helps to connect with the park's Education Coordinator prior to a visit, this curriculum does not necessitate scheduling guided park tours unless schools have the time and interest. If you are interested in meeting with a park staff member to discuss park management and current issues or challenges the park is addressing, please contact the Education Coordinator. Remember that all sites are open to the general public. Students and teachers should be aware of this shared use.

Field trip lessons in this curricular unit challenge students to conduct detailed "site studies." These site studies work well at most park locations, though the following are recommended in order of priority for their relevance to this unit.

*****Spruce Tree House Closure, 2016** Until further notice, the Spruce Tree House cliff dwelling is closed to visitors due to rock fall safety hazards. The Spruce Tree House trail is open to the overlook where visitors can get a clear view of the cliff dwelling. Groups working with this curriculum will find that the Chapin Mesa Archeological Museum, the open sections of the Spruce Tree House trail, as well as other sites throughout the park, will help students complete the curriculum's field trip site studies. See list below for details on other sites in the park.***

Visitor and Research Center (VRC)

- **Location:** Off highway exit to the left, before entering park
- **Travel time to Chapin Mesa Museum:** 45-minute drive
- **Suggested time to spend there:** 40 minutes
- **Description:** The VRC provides a place for park orientation and a quick look into the Ancestral Pueblo world. From dioramas to digital collections, this center is a great introduction to the park's mission and an important resource for your students. There is a great deal of information about the many stakeholders who help in park management. Pay careful attention to interpretive signs outside and in the center as well as the collections and research rooms visible to the public.
- **Amenities:** Restrooms, picnic areas, water filling station, ticket sales, gift shop

Spruce Tree House

- **Location:** Chapin Mesa Museum Loop
- **Travel time from Visitor and Research Center:** 45-minute drive
- **Travel time from Chapin Mesa Museum:** 10–15 minute walk each way
- **Suggested time to spend there:** 30 minutes in the site plus time on the trail

- **Description:** This cliff dwelling allows students to see the technology and ingenuity utilized by the Ancestral Pueblo people. Here students can see a seep spring, go inside a kiva, and see a mano and metate. Park interpretive staff is always available here and students should feel free to ask questions.
- **Amenities:** Restrooms, picnic area nearby, shade, Chapin Mesa Museum book store, interpretive exhibits

Chapin Mesa Archeological Museum

- **Location:** Chapin Mesa Museum Loop
- **Travel time from Visitor and Research Center:** 45-minute drive
- **Suggested time to spend there:** 40 minutes (an additional 25 minutes if you would like your students to watch the introductory video).
- **Description:** This museum provides students with a wonderful visual timeline of the Ancestral Pueblo world through chronological dioramas. Artifacts found throughout the park are on display here. There is a display board on the history of fires and their effect on artifacts and architecture within the park.
- **Amenities:** Exhibits and bookstore, nearby restrooms, café, nice spots to have lunch and discuss work.

Mesa Top Sites

- **Location:** Mesa Top Loop
- **Travel time from Visitor and Research Center:** 50-minute drive
- **Travel time from Chapin Mesa Museum:** 15-minute drive
- **Suggested time to spend there:** 1.5–2 hours depending on number of stops with driving time
- **Description:** This 6-mile driving tour provides students the opportunity to see the evolution of Ancestral Pueblo architecture. The loop includes five stops and three overlooks with parking for buses.
- **Amenities:** See below

Stop/Overlook Name	Bus Parking on	Recommended Time	Amenities
Pithouse (A.D. 600)	Left	5 min	None
Navajo Canyon Overlook	Right	5 min	None
Square Tower Overlook	Right	10 min (some walking)	None
Pithouse and Pueblo (A.D. 700–950)	Right	10 min	None
Mesa Top Sites (A.D. 900–1100)	Right	10 min	Restrooms
Sun Point Pueblo (A.D. 1200)	Left	5 min	None
Sun Point Overlook	Right	10 min	None
Oak Tree House Overlook	None		
Fire Tower Overlook	None		
Sun Temple	Left	10 min	Restrooms, benches

Grade 7-8 Standards Alignment

Next Generation Science Standards

Performance Expectations:

MS-LS2: Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations

MS-LS2-5: Evaluate competing design solutions for maintaining biodiversity and ecosystem services.

MS-ESS3-3: Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.*

Science and Engineering Practices:

Engaging in Argument from Evidence

- Use an oral and written argument supported by evidence to support or refute an explanation of a model for a phenomenon.

Obtaining, Evaluating, and Communicating Information

- Gather, read and synthesize information from multiple appropriate sources and assess the credibility, accuracy, and possible bias of each publication and methods used, and describe how they are supported or not supported by evidence.

Disciplinary Core Ideas:

LS4.D: Biodiversity and Humans: Changes in biodiversity can influence humans' resources, such as food, energy, and medicines, as well as ecosystem services that humans rely on—for example, water purification and recycling.

ESS3.A: Natural Resources: Humans depend on Earth's land, ocean, atmosphere, and biosphere for many different resources. Minerals, fresh water, and biosphere resources are limited, and many are not renewable or replaceable over human lifetimes. These resources are distributed unevenly around the planet as a result of past geologic processes.

ESS3.C: Human Impacts on Earth Systems – Human activities have significantly altered the biosphere, sometimes damaging or destroying natural habitats and causing the extinction of other species. But changes to Earth's environments can have different impacts (negative and positive) for different living things. Typically as human populations and per-capita consumption of natural resources increase, so do the negative impacts on Earth unless the activities and technologies involved are engineered otherwise.

Crosscutting Concepts:

Systems and System Models: Systems may interact with other systems; they may have sub-systems and be a part of larger complex systems.

Stability and Change: Small changes in one part of a system might cause large changes in another part.

Cause and Effect: Cause and effect relationships may be used to predict phenomena in natural or designed systems.

Connections to Engineering, Technology, and Applications of Science

- The use of technologies and any limitations on their use are driven by individual or societal needs, desires, and values; by the findings of scientific research; and by differences in such factors as climate, natural resources, and economic conditions. Thus technology use varies from region to region and over time.
- All human activity draws on natural resources and has both short and long-term consequences, positive as well as negative, for the health of people and the natural environment.

Connections to Nature of Science

- Scientific knowledge can describe the consequences of actions but does not necessarily prescribe the decisions that society takes.
- Scientists and engineers are guided by habits of mind such as intellectual honesty, tolerance of ambiguity, skepticism, and openness to new ideas.

Common Core Academic Standards

Anchor Standards – Language Arts

CCSS.ELA-Literacy.CCRA.R.1: Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.

CCSS.ELA-Literacy.CCRA.R.7: Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.

CCSS.ELA-Literacy.CCRA.R.10: Read and comprehend complex literary and informational texts independently and proficiently.

CCSS.ELA-Literacy.CCRA.W.1: Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.

CCSS.ELA-Literacy.CCRA.W.2: Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

CCSS.ELA-Literacy.CCRA.W.3: Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences.

CCSS.ELA-Literacy.CCRA.W.4: Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

CCSS.ELA-Literacy.CCRA.W.7: Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.

CCSS.ELA-Literacy.CCRA.W.8: Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

CCSS.ELA-Literacy.CCRA.W.9: Draw evidence from literary or informational texts to support analysis, reflection, and research.

CCSS.ELA-Literacy.CCRA.SL.1: Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

CCSS.ELA-Literacy.CCRA.SL.2: Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.

CCSS.ELA-Literacy.CCRA.SL.4: Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

CCSS.ELA-Literacy.CCRA.L.1: Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

CCSS.ELA-Literacy.CCRA.L.2: Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

CCSS.ELA-Literacy.CCRA.L.6: Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

Mathematics

CCSS.Math.Practice.MP2: Reason abstractly and quantitatively.

CCSS.Math.Practice.MP3: Construct viable arguments and critique the reasoning of others.

CCSS.Math.Practice.MP5: Use appropriate tools strategically.

CCSS.Math.Practice.MP6: Attend to precision.

CCSS.Math.Content.5.MD.B.2: Represent and interpret data.

College, Career and Civic Life (C3) Framework for Social Studies State Standards

Dimension 1: Developing Questions and Planning Inquiries

D.1.1.6-8: Explain how a question represents key ideas in the field.

D1.2.6-8: Explain points of agreement experts have about interpretations and applications of disciplinary concepts and ideas associated with a compelling question.

D1.5.6-8: Determine the kinds of sources that will be helpful in answering compelling and supporting questions, taking into consideration multiple points of views represented in the sources.

Dimension 2: Civic and Political Institutions

D2.Civ.1.6-8: Distinguish the powers and responsibilities of citizens, political parties, interest groups and the media in a variety of governmental and nongovernmental contexts.

D2.Civ.2.6-8: Explain specific roles played by citizens.

D2.Civ.3.6-8: Examine the origins, purposes and impact of constitutions, laws, treaties, and international agreements.

D2.Civ.6.6-8: Describe the roles of political, civil, and economic organizations in shaping people's lives.

Dimension 2: Participation and Deliberation

D2.Civ.10.6-8: Explain the relevance of personal interests and perspectives, civic virtues, and democratic principles when people address issues and problems in government and civil society.

Dimension 2: Processes, Rules, and Laws

D2.Civ.12.6-8: Assess specific rules and laws (both actual and proposed) as means of addressing problems.

D2.Civ.13.6-8: Analyze the purposes, implementation, and consequences of public policies in multiple settings.

D2.Civ.14.6-8: Compare historical and contemporary means of changing societies, and promoting the common good.

Dimension 2: Geographic Representations

D2.Geo.2.6-8: Use maps, satellite images, photographs and other representations to explain relationships between the locations of places and regions and changes in their environmental characteristics.

D2.Geo.3.6-8: Use paper based and electronic mapping and graphing techniques to represent and analyze spatial patterns of different environmental and cultural characteristics.

Dimension 2: Human-Environment Interactions

D2.Geo.4.6-8: Explain how cultural patterns and economic decisions influence environments and the daily lives of people in both nearby and distant places.

D2.Geo.5.6-8: Analyze the combinations of cultural and environmental characteristics that make places both similar to and different from other places.

Dimension 2: Change, Continuity and Context

D2.His.1.6-8: Analyze connections among events and developments in broader historical contexts.

D2.His.3.6-8: Use questions generated about individuals and groups to analyze why they, and the developments they shaped, are seen as historically significant.

Dimension 3: Gathering and Evaluating Sources

D3.1.6-8: Gather relevant information from multiple sources while using the origin, authority, structure, context and corroborative value of the sources to guide the selection.

Dimension 3: Developing Claims and Using Evidence

D3.3.6-8: Identify evidence that draws information from multiple sources to support claims, noting evidentiary limitations.

D3.4.6-8: Develop claims and counterclaims while pointing out the strengths and limitations of both.

Dimension 4: Communicating Conclusions

D4.1.6-8: Construct arguments using claims and evidence from multiple sources, while acknowledging the strengths and limitations of the arguments.

D4.2.6-8: Construct explanations using reasoning, correct sequence, examples and details with relevant information and data, while acknowledging the strengths and weaknesses of the explanations.

Dimension 4: Critiquing Conclusions

D4.4.6-8: Critique arguments for credibility.

Lesson 1 – Who Are Mesa Verde’s Stakeholders?

Lesson overview:

This lesson is an overview of Mesa Verde National Park history and an introduction to the people involved in its evolution. Students will use online or printed resources to create timelines of Mesa Verde National Park history from earliest human inhabitation to the present day. As students detail their timelines, they will create a list of possible stakeholders (individuals, organizations, groups of people, businesses) that were involved during those different periods in the park’s history.

Students will compare their brainstormed list of stakeholders with the unit’s stakeholder list, making any needed revisions to their timelines. Once assigned to unit stakeholder teams, students will begin research on their specific stakeholders.

Time required: 2–3 hours (class periods or as homework assignments)

Materials/resources:

1. Student handout – “Mesa Verde History and the People Who Shaped It”
2. Student handout – “Mesa Verde Stakeholders and Student Research Teams”
3. Internet access or copies of Mesa Verde timelines (see resources links on student handout, “Mesa Verde History and the People Who Shaped It”)

Learning objectives:

- Students will create chronological timelines of Mesa Verde National Park using online resources, identifying stakeholders involved in the park’s evolution over time.
- Students will revise their timelines based on additional information about important modern stakeholders.
- Students will begin research on individual stakeholder groups, identifying their roles, responsibilities, perspectives, and concerns related to the park.

Intro activities:

1. Field notebook “Pre-visit Questions” assigned as short writing prompts, homework or partner/small group discussions.
2. Field notebook “Mission Statement Questions” assigned as short writing prompts, homework or partner/small group discussions.

Directions:

1. **Introduce** the unit by showing photos of Mesa Verde National Park (many available online), **discussing** what students know about the park, or by assigning some of the **writing** prompts from the field notebook to students individually or in pairs/small groups for discussion. Students

could also begin the lesson by brainstorming, sharing and refining definitions of “stakeholders.” A working definition for the unit is listed on the first student handout.

2. **Distribute** first student handout, “Mesa Verde History and the People Who Shaped It.” **Assign students** to work as individuals, pairs or small groups. Eventually, students will be broken into stakeholder teams for the remainder of the unit’s lessons. This arrangement could happen now, placing students in groups of two to four.
3. Stakeholder brainstorming: after reading through directions from the first handout, **make a list** on the board with students of possible stakeholders involved with Mesa Verde Park history. Then allow students to begin work on their timelines.
4. **Review** completed student timelines and add to the board any additional stakeholders students identified.
5. **Distribute** second student handout, “Mesa Verde Stakeholders and Student Research Teams” and **assign students to specific stakeholder teams**. Allow students to begin research on their individual stakeholder groups. This research will require some online, independent research time for each group.
6. **Wrap up** the lesson by having each stakeholder group provide a small, informal presentation of their stakeholder and initial research findings.

STUDENT HANDOUT

Mesa Verde History and the People Who Shaped It

Introduction: This activity will orient you to the history of Mesa Verde National Park and the people who have played, and continue to play, important roles in the park’s development: park *stakeholders*.

Stakeholders are individuals, organizations, groups of people, or businesses affected by a decision-making process in a particular location. Stakeholders protect and promote important **values** based on their career, passions, and affiliations. For a national park, stakeholder values might include people who work for the park, live near the park, have a historical relationship with the park or who visit the park. Their values may include protecting wildlife, keeping people safe, saving money, exploring new places or preserving and caring for history.

Directions: On separate sheets of paper, use online websites (or printed resources) to **create a timeline** of Mesa Verde National Park history that highlights possible stakeholders involved with the park during important time periods (see example below). Begin with human inhabitation around the year A.D. 550 and end with today.

Resources:

Mesa Verde National Park website: <http://www.nps.gov/meve/learn/index.htm>, especially NPS’s Mesa Verde Timeline: www.nps.gov/meve/learn/historyculture/stories.htm

Mesa Verde Park History: <http://www.visitmesaverde.com/mesa-verde-history.aspx>, follow the link to Mesa Verde National Park history synopsis:
<http://www.visitmesaverde.com/media/124547/mesa%20verde%20national%20park%20timeline.pdf>

Land Use History: <http://cpluhna.nau.edu/Places/mesaverde.htm>

Example of timeline:

Events	A.D. 550–750 Initial human occupation of Mesa Verde (pithouses)	A.D. 750 – People begin to build above-ground houses (Pueblos)	1906 Ute Mountain Utes exchange Mesa Verde lands for other lands in SW CO.
Stakeholders	Descendants of Basketmakers, human inhabitants, neighboring groups of people.	Inhabitants, now officially called “Pueblo people,” neighboring groups of people	Ute Mountain Ute Tribe, U.S. Federal Government, local ranchers and farmers, other neighboring tribes

STUDENT HANDOUT

Mesa Verde Stakeholders and Student Research Teams

Introduction:

You will be assigned a specific Mesa Verde National Park stakeholder to adopt throughout this unit. In every lesson, you will strive to further understand, detail, and advocate for the perspective of your stakeholder. In this activity, you will read about all the stakeholders in the unit and learn more about your specific stakeholders.

Assignment:

Carefully read through the following stakeholders and **revise** your Mesa Verde timeline to include them as needed. At what stage in the history of the park was each stakeholder involved? **Research** your assigned stakeholder using the online resources listed below.

Answer the following about your stakeholder on a separate sheet of paper:

1. What is the current role of this person or group of people (stakeholder) at the park?
2. What is the historical role of this person or group of people (stakeholder) at the park?
3. What are the responsibilities of this stakeholder at the park?
4. What specific areas of expertise does your stakeholder possess?
5. What sort of training/experience does it take to become this stakeholder?
6. What are some of the important concerns or issues this stakeholder perceives at the park?

Resources:

- Hopi Cultural Preservation Office, <http://www8.nau.edu/hcpo-p/ResProto.pdf>
- Mesa Verde Country Tourism, <http://www.mesaverdecountry.com/>
- Mesa Verde National Park, <http://www.nps.gov/meve/>
- National Association of Tribal Historic Preservation Officers, <http://www.nathpo.org/>
- National Park Service, <http://www.nps.gov/>
- USAjobs, <https://www.usajobs.gov/>
- Ute Mountain Ute Tribal Park, <http://www.utemountaintribalpark.info/>
- Ute Mountain Ute Tribe website, <http://www.utemountainutetribes.com/>

Stakeholders:

1. Archaeologist

Archaeologists monitor the cultural resources of Mesa Verde National Park and inform others where archaeological resources are located and how developments may affect them. Park areas specific to your job include areas with cultural resources like cliff dwellings, the Mesa Top sites, unexcavated areas, and the Chapin Mesa Museum.

2. Botanist

Botanists classify, document, and monitor the species of the four major plant communities of Mesa Verde National Park. You inform others of possible complications affecting these species including invasive weed management, and suggest management plans for their protection. Park areas specific to your job include Knife Edge Trail, Petroglyph Point Trail, and Spruce Tree House Trail.

3. Chief of Maintenance

Chief of Maintenance supervises crews who ensure that public facilities, government offices, housing, roads, and trails are safe and clean. You coordinate projects across the other divisions while overseeing daily custodial, repair, and maintenance work. Park areas specific to your job include all buildings, trails, roads, overlooks, and support structures such as water tanks and radio transmitters.

4. Curator

The curator manages the storage, research, display, and public access of natural and cultural collections at Mesa Verde National Park. Park areas specific to your job include the Visitor and Research Center and Chapin Mesa Museum.

5. Hopi Cultural Historic Preservation Officer

As a representative of Hopi culture, descendants of Ancestral Pueblo people, you protect the spirit and history of your people. You help park visitors understand that Pueblo culture is alive and well and maintains a strong connection to ancestral homelands like Mesa Verde National Park. Park areas specific to your job include the Mesa Top sites, Far View sites, Chapin Mesa Museum, the Visitor and Research Center, and cliff dwellings.

6. National Park Service (NPS) Law Enforcement

Law enforcement monitors legal activity and prevents visitors from breaking laws. You maintain a safe environment and protect resources from vandalism, illegal collection, theft, or wildlife harassment. NPS law enforcement works in all areas of the park.

7. Park Ranger / Interpreter

Park Rangers share historical, ecological, and other information with visitors of the park while promoting stewardship. You enhance the visitor experience and encourage safe use of the park. Park areas specific to your job include areas of interpretation like cliff dwelling tours, and Spruce Tree House.

8. Park Superintendent

Park Superintendent is responsible for listening to stakeholders, consulting with park staff, and making decisions based on a variety of factors. These include stakeholder opinions, budgets, political trends, community concerns, and federal and state laws. All park areas, as well as park neighbors and other land management agencies in the region, are related to your job.

9. Tourism Industry

The tourism industry cultivates public interest in the park. You encourage people to visit the region and make sure everyone enjoys their experience. Park areas specific to your job include areas of public interest such as cliff dwelling tours, the Mesa Top sites, Visitor and Research Center, and the Chapin Mesa Museum.

10. Ute Mountain Ute Tribal Chairman

You are a member of the executive branch of government in the Ute Mountain Ute Tribe, whose reservation lies on the western edge of Mesa Verde. You protect the legal rights of your people. Park areas specific to your job include Ute Mountain Ute Reservation boundaries and the area of Mesa Verde National Park that crosses into the reservation between Cliff Palace and Balcony House hiking trails.

11. Wildlife Biologist

Wildlife biologists study and manage wildlife species within Mesa Verde National Park. You create and implement management plans that support the diversity, health, and wellness of the park's ecosystems and animals. Park areas specific to your job include areas of wildfire throughout the park, Visitor and Research Center, and the Far View sites.

Lesson 2 – Here We Go ... A Park Preview

Lesson overview:

In this lesson, students will preview their park field trip itinerary through the lens of their stakeholder, watch a 10-minute video about visiting Ancestral Pueblo sites and reflect on the meaning and significance of sacred sites.

Time required: 1–2 hours

Materials/resources:

1. Park maps (one/stakeholder team): <http://www.nps.gov/meve/planyourvisit/maps.htm>
2. Park visitor guides (one/stakeholder team): download the appropriate season for your field trip <http://www.nps.gov/meve/planyourvisit/brochures.htm>
3. Park itinerary: share with students your field trip itinerary. See curricular unit section on recommended itineraries to develop.
4. *Visit with Respect* digital access – either from http://www.crowcanyon.org/EducationProducts/pueblo_history_kids/video_visit_with_respect.asp or <https://www.youtube.com/watch?v=zwDrLqThhYY>
5. Student handout – “Here We Go ... A Park Preview”

Learning objectives:

- Students will examine maps and visitor guides of Mesa Verde National Park, analyzing sites of interest and concern to their stakeholder groups.
- Students will articulate what it means to visit Ancestral Pueblo sites “with respect” after watching a video describing Pueblo connections to sacred sites in the Mesa Verde region.

Intro activities:

1. Field notebook “Before watching *Visit with Respect*” questions assigned as short writing prompts, homework or partner/small group discussions.
2. Pre-visit Lesson 1, “Who Are Mesa Verde’s Stakeholders?”

Directions:

1. **Introduce** the lesson by reviewing your Mesa Verde field trip logistics and itinerary. Ask students to **circle or highlight** the sites in the park you will visit directly on the maps.
2. Using student handout, “Here We Go ... A Park Preview,” ask students to work in their stakeholder teams to **identify** sites of interest in the park to their stakeholders.

3. Have students independently **complete questions** 3 through 5 on student handout “Here We Go ... A Park Preview” before watching the video. Students should **discuss** answers with a partner and **report** their responses back to class.
4. Have students **preview** questions 6 through 10 before watching the video. **Show** the video and give students a few minutes to complete the questions.
5. Ask students to **share** responses with a partner and **report** responses to the class.
6. **Wrap up** the lesson by ensuring all student questions about the field trip are answered and expected behavior while visiting the park is clear.

Visit with Respect Video

The people who once lived at Mesa Verde migrated south and their descendants now reside on tribal lands, in villages and communities and in others cities in the Southwest and around the world. Twenty-six Native groups and tribes trace their histories to Mesa Verde National Park and surrounding areas in the Four Corners. *Visit with Respect* is a 10-minute video produced by the Bureau of Land Management and Crow Canyon Archaeological Center in partnership with contemporary Pueblo people. In the video, descendants of the inhabitants of Mesa Verde share their feelings about Ancestral Pueblo sites and their expectations for visitor behavior.

3. Where are the ancestral homelands or nations of your family or community? Have you ever visited those places?

4. Have you ever visited places once inhabited by people who have since moved away? Where? How? What was it like there?

5. What does it mean to “visit with respect?”

Lesson 3 – Stakeholder Site Studies

Lesson overview:

At each site students visit during the Mesa Verde field trip they will conduct site studies using a guided handout to carefully experience and examine the site from the perspective of their assigned stakeholder group.

Time required: 15–20 additional minutes at each site visited.

Materials/resources:

1. Prepared park itinerary – to support this lesson and unit, this itinerary should include a visit to the Visitor and Research Center or the Chapin Mesa Museum and at least one other site in the park.
2. Student handout – “Site Study.” One copy for each site for each group of stakeholders.

Learning objectives:

- Students will explore the park and various sites as visitors.
- Students will study each site through the lens of their stakeholder, describing dimensions of the park, tourist visitation, or management that pertain to their stakeholders.

Intro activities:

1. Field notebook “Field Trip Questions” – find time for students to sit alone during the field trip and respond to some of these questions.
2. Pre-visit lessons.

Directions:

1. At each site your school visits, ask students to **explore** the sites and **complete** one handout.
2. **Wrap up** the lesson at the end of the day by having students share their stakeholder’s perspectives on some of the sites you visited.

STUDENT HANDOUT
Site Study

During your field trip to Mesa Verde National Park, you will **visit** different sites in the park. **Explore** each site carefully, thinking about the characteristics of the park (interpretive signs, trails, exhibits, cultural and natural resources, visitor services) that matter to your stakeholder. **Complete** the following Site Study at each location you visit.

Stakeholder	Site name
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Describe the purpose of this site. Who do you think decided it was an archaeological site, and why at this place?

Map and label this site. Include all points of interest, parking, visitor services, interpretive resources, archaeological or ecological resources, safety resources or signage and any other interesting areas.

What cultural, ecological or other resources are in this area? Why?	What kind of signage is here? Why?
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Who else is at this site? What are they doing here? What are they most interested in?

What stakeholders contribute to decisions or management in this area? How?	What role or responsibility does your stakeholder have in this location? What are their interests or concerns? How are they addressed?
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What additional information can you learn about your stakeholder at this site?

Describe your personal experience at this location. What did you do here? What do you find most interesting or engaging? What do you find confusing, problematic or unclear?

Lesson 4 – Field Trip Extensions

1. **Interview stakeholders.** Encourage students to engage stakeholders they encounter at the park: tourists, law enforcement, park interpretive staff, tourist services staff, archaeologists. Students can prepare questions before visiting the park in anticipation of meeting with someone. Teachers can also connect with the Education Coordinator prior to the field trip to see if park employees might be available to meet with students during the day to discuss park management.
2. **Go on a tour.** Guided tours are available to tourists and school group by scheduling in advance. Challenge students to experience the tour as a visiting tourist, AND as their designated stakeholder.
3. **Take a hike.** Take the time to explore some of the longer hikes in the park. This is a great opportunity for students to reflect on Field Notebook questions and explore the scenery of the park and surrounding landscape.
4. **Visit with local stakeholders.** If your school has time, visit a local business (Colorado Welcome Center in Cortez, local restaurants, gas stations) or call ahead and try to arrange a meeting with members of the Ute Mountain Ute Tribe to discuss the role of Mesa Verde National Park in the region's economy and cultural context.

Lesson 5 – Stakeholder Brochures

Lesson overview:

Students synthesize their research, explorations and personal experiences by creating informational brochures about their stakeholders' roles and responsibilities at Mesa Verde National Park.

Time required: 3–5 hours, class periods or possible homework assignment

Materials/resources:

1. Completed Pre-visit lesson handouts and field trip site studies
2. Student handout – “Stakeholder Brochures”

Learning objectives:

- Students synthesize information from online and experiential research about their stakeholders in an informational brochure.

Intro activities:

1. Field notebook “Post-Visit Questions” assigned as short writing prompts, homework or partner/small group discussions.
2. Pre-visit lessons.
3. Field trip lessons.

Directions:

1. **Distribute** student handout – “Stakeholder Brochures”
2. **Wrap up** assignment by having students share and comment on each other’s brochures.

STUDENT HANDOUT

Stakeholder Brochures

Introduction: In this assignment, you will summarize your stakeholder research by creating a brochure that details the roles and responsibilities of your stakeholder at Mesa Verde National Park.

Assignment: Create a brochure that explains the roles and responsibilities of your stakeholder at Mesa Verde National Park. Use all of your previous research to help. Your brochure should include:

1. Description of your **stakeholder**. Who are they? What do they do at the park?
2. Description of your stakeholder's **areas of expertise**. What do they know most about? How do they learn this information? What is their training like?
3. Description of your stakeholder's **roles and responsibilities** at the park.
4. Description of **important sites** at the park to your stakeholder.
5. Description of **historical role** of your stakeholder in the park's evolution.
6. Description of **current projects or challenges** your stakeholder is working on.
7. Description of **issues and concerns** your stakeholder has for the park's future.
8. If possible, a short **biography** of an actual individuals who represent your stakeholder group.

Resources:

- Mesa Verde National Park website: <http://www.nps.gov/meve/learn/index.htm>, especially NPS's Mesa Verde Timeline: www.nps.gov/meve/learn/historyculture/stories.htm
- Mesa Verde Park History: <http://www.visitmesaverde.com/mesa-verde-history.aspx> follow the link to Mesa Verde National Park history synopsis: <http://www.visitmesaverde.com/media/124547/mesa%20verde%20national%20park%20timeli ne.pdf>
- Land Use History: <http://cpluhna.nau.edu/Places/mesaverde.htm>
- Hopi Cultural Preservation Office: <http://www8.nau.edu/hcpo-p/ResProto.pdf>
- Mesa Verde Country Tourism: <http://www.mesaverdecountry.com/>
- Mesa Verde National Park: <http://www.nps.gov/meve/>
- National Association of Tribal Historic Preservation Officers: <http://www.nathpo.org/>
- National Park Service: <http://www.nps.gov/>
- USAjobs: <https://www.usajobs.gov/>
- Ute Mountain Ute Tribal Park: <http://www.utemountaintribalpark.info/>
- Ute Mountain Ute Tribe website: <http://www.utemountainutetribe.com/>

Lesson 6 – Proposed Park Projects

Lesson overview:

Students will analyze proposed park projects from the perspective of their assigned stakeholder. Students will research and write a position statement about the project based on their stakeholder’s concerns; students will then discuss and debate the project with other stakeholder teams to come to a consensus about how to solve the problem.

Time required: 4–6 hours, sections of the lesson could be assigned as homework or occur over a number of class periods.

Materials/resources:

1. Student handout – “Proposed Park Projects Directions”
2. Student handout – “Proposed Park Projects Case Study – Management of Feral Horses”
3. Student handout – “Proposed Park Project Case Study – Mitigation and Suppression of Wildfires”

Learning objectives:

- Students analyze information from the perspective of their stakeholder.
- Students find and synthesize research in support of their argument.
- Students write and make verbal arguments about their position on the issue.

Intro activities:

1. Field notebook “Post-Visit Questions” assigned as short writing prompts, homework or partner/small group discussions.
2. Pre-visit lessons.
3. Field trip lessons.
4. Stakeholder brochures.

Directions:

1. **Distribute** student handout – “Proposed Park Projects Directions.” Allow students time to ask questions or clarify assignment information.
2. **Distribute** one or both of the case studies. Allow students time to **read** and **review** information in the handout about the problem and to complete additional research on the issue or their stakeholder’s involvement with similar issues. **Support** teams as they develop their arguments and write their position statement.

3. **Share** completed position statements from each stakeholder group with the class for review (or have each stakeholder group briefly present their position).
4. **Moderate** a discussion/debate among students as stakeholders trying to come to a decision on the best course of action for Mesa Verde National Park.
5. **Wrap up** assignment by having students reflect on their stakeholder’s perspectives, their role and responsibilities at the park, and the overall future and sustainability of the park in a class discussion or in written responses.

STUDENT HANDOUT

Proposed Park Projects Directions

Introduction:

You will use everything you've learned about Mesa Verde National Park and the roles and responsibilities of your stakeholder to write a position statement and participate in discussions about a real-world, contemporary park challenge.

Assignment:

Carefully **review** the Proposed Park Project Case Study from the perspective of your stakeholder. Use the internet or other classroom resources to **conduct additional research** on the project. Find information about your stakeholder's involvement in the project and their possible concerns or issues with it. **Take a stand** in support, opposition, or revision of the project. **Write** a position statement about the issue. Your position statement should include:

1. A summary of the proposed project
2. A description of your stakeholders and who you represent, your areas of expertise and interest and the factors you consider and value when it comes to addressing this issue
3. Your position of support, opposition, or modification of the proposed project
4. Specific approaches, goals, and plans for your position
5. Supporting arguments for your position including evidential support
6. Next steps you would like the park to take on the issue
7. Potential challenges the park may encounter if they follow your recommendation and how those challenges should be addressed

Then, **prepare to discuss** the issue with other park stakeholders in a roundtable meeting. Be ready to **listen** to other stakeholders' concerns, ideas, and arguments. Be ready to **respond thoughtfully** to those arguments and **move towards an informed, relevant, purposeful solution**.

STUDENT HANDOUT

Proposed Park Project Case Study

Management of Feral Horses

The problem: Between 150 and 200 trespass wildlife including cows and feral horses freely roam through Mesa Verde National Park boundaries causing damage to archaeological sites, park infrastructure, native vegetation and soils. Trespass wildlife have been known to outcompete native species for water sources and threaten the safety of park visitors and staff. The park would like to:

- reduce negative impacts to the park’s natural and cultural resources
- reduce threats to staff and public safety
- reduce facility damage by trespass livestock

The question: How should the park address the negative impacts of trespass wildlife within its boundaries?

Background: Feral horses and other trespass wildlife have been in Mesa Verde National Park since its inception. Originally domesticated but set free, these horses cause significant damage to park resources. The wildlife biology team has proposed and attempted various fencing and removal strategies for the horses but none have solved the problem decisively. Attempts at creating comprehensive management plans for horse removal have been challenged by the public; many people value the presence of the wild horses in the park. Additionally, efforts to push trespass wildlife out of the park impacts park neighbors, including the Ute Mountain Ute Tribe.

Possible solutions:

1. Helicopter Roundup: helicopters used to wrangle horses into a specific area
 - Cost estimate: \$500–\$2,000 per horse
 - Advantage: quick and effective
 - Disadvantage: expensive; traumatizing to horses
2. Bait and Trap: horses are lured into a gated area using water
 - Cost estimate: \$900–\$2,500 per horse
 - Advantage: not harmful
 - Disadvantage: not efficient

Key Terms

Infrastructure: the basic physical and organizational structures and facilities (e.g., buildings, roads, and power supplies) needed for the operation of an organization, community, or society

Feral: an animal living in the wild but descended from domesticated individuals

Trespass wildlife/trespass livestock: wild, feral, or domesticated animals that roam freely on property where they do not belong

3. Fencing and Barriers: one-way fencing used to let horses out of, but not into, park
 - Cost Estimate: \$150 per 10 meters
 - Advantage: does not cause harm to horses, does not affect other large animals (native deer and elk can jump the height, horses/cows cannot)
 - Disadvantage: needs to be maintained; horses move to neighboring Ute Tribal Park and cause similar problems
4. Blocking Unnatural Water: block horses from accessing human-made water sources with fence
 - Cost estimate: \$150 per 10 meters
 - Advantage: protects infrastructure; discourages visitors from feeding horses
 - Disadvantage: removes a water source for native wildlife
5. Fertility Control: stop reproduction with vaccine
 - Cost estimate: \$650 per horse
 - Advantage: temporary; slows population growth
 - Disadvantage: costly; hard to deliver; can be controversial
6. Do nothing
 - Cost estimate: free
 - Advantage: minimal personnel or funds needed
 - Disadvantage: damage to infrastructure; competition with other species; danger to visitors/staff

Additional information:

- Horses disturb the ecological balance and cultural sites of the park. Their occupation of this area causes competition for natural resources with native species such as elk and deer. They have caused harm to both infrastructure and archaeological sites by wandering into unprotected areas.
- Feral horses in search of water cause damage to ice dispensers and pipes within the park. In 2014, horses caused damage requiring an estimated \$2,000 in repairs.
- Horses within national parks are not protected by the 1971 Wild Free Roaming Horse and Burro Act. In Mesa Verde National Park, these horses are considered trespass livestock.
- Overgrazing by horses disrupts the food chain causing native species to relocate to other areas. In 2012, prairie dogs were forced to relocate. They established a new home in an archaeological mound within Morefield Reservoir. This caused some damage to this area, proving that such relocations can be extremely harmful to archaeological sites. Additionally, such moves threaten the sustainability of the species within the park. (NRAR 2012, p. 18)
- Feral horses pose a large safety risk of car accidents due to their size. In 2012, one employee hit a feral horse with his/her truck. It is believed that had the car been smaller the accident would have been fatal. (NRAR 2012, p. 21)
- In 2014, six horses found dead in the park sparked protest from animal rights activists. Although it was found these animals died of dehydration that would have occurred naturally, the negative press cost the park with lowered visitation.

Resources:

1. Mesa Verde Trespass Livestock Plan:
<http://parkplanning.nps.gov/projectHome.cfm?parkID=79&projectID=44089> and
<http://parkplanning.nps.gov/document.cfm?parkID=79&projectID=44089&documentID=56065>
2. *Cortez Journal*, 7/30/2014: “Horse deaths trigger protest at Mesa Verde” by Jim Mimiaga,
<http://www.cortezjournal.com/article/20140730/NEWS01/140739988/0/SEARCH/Horse-deaths-trigger-protest-at-Mesa-Verde>
3. *Denver Post*, 9/22/2014: “Push for protection for Mesa Verde wild horses continues” by Nancy Lofholm, http://www.denverpost.com/news/ci_26579018/push-protection-mesa-verde-wild-horses-continues
4. *Denver Post*, 10/06/2013: “At Mesa Verde National Park, wild horses have become unwanted nuisance” by Nancy Lofholm, http://www.denverpost.com/news/ci_24248877/at-mesa-verde-national-park-wild-horses-have
5. *The Dolores Star*, 3/26/2014: “Mesa Verde trying to push trespassing horses out of park” by Jim Mimiaga, <http://www.cortezjournal.com/article/20140326/DS03/140329855/0/SEARCH/Mesa-Verde-trying-to-push-trespassing-horses-out-of-park#>
6. *Durango Herald*, 7/08/2015: “‘Roaming Wild’ looks at wild horses in the West” by Jim Mimiaga, <http://www.durangoherald.com/article/20150708/NEWS06/150709649/--x2018-Roaming-Wild-x2019--looks-at-wild-horses-in-the-West->
7. Mesa Verde’s New Releases for more information on their stance on wild horses within the park at current: <http://www.nps.gov/meve/learn/news/newsreleases.htm>
8. “Free to Roam? The Mustang Debate” at <https://www.youtube.com/watch?v=MLOBQmNtm9U>

STUDENT HANDOUT

Proposed Park Projects Case Study

Mitigation and Suppression of Wildfires

The problem: Wildfires have played important roles in the ecology of Mesa Verde’s ecosystems since long before human inhabitation, clearing dead vegetation and supporting new growth cycles. But wildfires threaten the cultural and natural resources of the park, visitor and staff safety, and public access to the park.

The question: How should Mesa Verde National Park address the threat of naturally occurring wildfires?

Background: Mesa Verde has faced 20 large fires since it opened in 1906 burning over 75% of the park. Each of these fires threatened the resources of the area and altered the environment.

In the extremely dry summer of 2000, two back-to-back fires, the Bircher Fire and the Pony Fire, caused extensive strain on the ecological, cultural, and financial resources of the park. On July 20, 2000, the Bircher Fire began outside the park from a lightning strike. As the fire spread quickly into the park, nearly 1,000 visitors were evacuated. It took a combination of aerial water and retardant drops alongside bulldozer trenches and multiple other techniques to get the fire contained. Finally, 16 days after the lightning strike, the fire was extinguished. The extensive fire suppression measures cost \$5,600,000.

While the Bircher Fire was being contained, a lightning strike on August 2 ignited the Pony Fire on Wetherill Mesa, which burned for 14 days before it was extinguished. The Pony Fire extended the park’s closure an additional 14 days and cost \$2,860,000 to suppress. Together these fires destroyed five buildings, burned over 40% of the park, and caused a loss of nearly 20 visitation days during the park’s peak season. Because there was so much fuel on the ground (such as cheatgrass and dead brush), both fires burned severely. The total cost of both fires was over \$15 million.

The aftermath of these fires had long-reaching impacts. In order to clean up the damage from fire suppression efforts, the park had to spend almost \$200,000. The park also offered free admission to visitors for two weeks to make up for the closure, further reducing revenues. The fire suppression measures had detrimental effects on the wildlife as well. The retardant from the Bircher Fire was dropped on the Mancos River, killing almost all aquatic populations. The park also had to employ special archaeological crews to address the extent of the cultural damage.

Key Terms

Fire mitigation: land management efforts including fuels reduction, prescribed burns and other strategies to reduce the risk of fire in specific areas

Fire suppression: fire management efforts including dropping water, digging fire lines and using chemical fire retardant to slow and stop existing wildfires

Fuels: in wildfire management, “fuels” are dry vegetation (grasses, dead shrubs, trees, limbs) on or near to the ground that can catch, carry, and spread fires

In looking towards the future, the park would like to be proactive about fire mitigation and suppression, creating a plan that:

- protects the safety of visitors and staff
- protects the natural and cultural resources
- reduces the risk of high-intensity wildfires
- maintains visitor access and revenue streams
- maintains the beneficial qualities of naturally occurring wildfires in Mesa Verde ecosystems
- is cost efficient

Possible Solutions:

Fire Mitigation

1. Prescribed Fires: Controlled and monitored fire ignited by professionals to reduce fuels
 - Cost estimate: \$300 to \$500 per acre
 - Advantage: Reduces fuels without transporting materials protecting archaeology and infrastructure
 - Disadvantage: Potential unintended damage to archaeology and wildlife; reveals archaeology to weathering and vandalism
2. Hazardous Fuels Reduction: Removal of vegetation that could potentially be fuel
 - Cost estimate: \$500 to \$750 per acre
 - Advantage: Fire across treated area will burn less intensely and at a lower temperature, protecting archaeology and infrastructure
 - Disadvantage: Sometimes harms rare plant species

Fire Suppression

1. Aerial Water Drop: Drop of water from plane or helicopter
 - Cost estimate: \$2,000 per 1,000 liters
 - Advantage: Less harmful to environment and archaeology than retardant drops
 - Disadvantage: Creates new rainfall runoff routes that disturb trails, archaeological sites, and environment
2. Aerial Fire Retardant: Drop of extinguishing material from plane or helicopter
 - Cost estimate: \$180,000 per day
 - Advantage: Less erosion than water
 - Disadvantages: Lethal to some wildlife; can stain environment and archaeology red; requires immediate clean up
3. Applying Fire Retardant: Application of extinguishing material via fire fighters on the ground
 - Cost estimate: \$2,000 to \$4,000 per acre
 - Advantage: Localized; less damage to surrounding area
 - Disadvantage: Requires more manpower, danger, cost
4. Dozer Line: Creation of a trench by a backhoe to stop a fire's ability to cross an area
 - Cost estimate: \$300 to \$1,500 per day
 - Advantage: Highly successful and low cost
 - Disadvantage: Damages environment and archaeology

5. Letting fires burn out: No suppression measures
 - Cost: Depends on damages
 - Advantage: Natural to environment
 - Disadvantage: Can get out of control with high cost damages

Additional information:

- Wildfires can burn hot enough (>700 degrees F) to remove rock art from sandstone. The Chapin 5 Fire in 1996 destroyed a large amount of rock art known as the Battleship Rock Panel. Rock art on the Petroglyph Point Trail and within cliff dwellings faces the risk of severe wildfires. (NPS, 2007)
- Public and employee safety is the highest management concern during a large fire in or near the park (MEVE, 2015). Fires may result in the closure of certain roads, loops, tours, or even the whole park. Furthermore, buses may be placed at certain areas of the park when the park has a high threat of a wildfire to ensure quick evacuation if necessary. This requires extra employee personnel and visitor cooperation.
- There are 10 safety zones located throughout the park. These areas are essential to the safety of visitors in the case of a wildfire blocking the exit roads. These areas are maintained through prescribed fires and hazardous fuel removal. (MEVE, 2015)
- Facilities are prioritized in order of importance to the park. At the top of this list are facilities housing collections and of historical importance. (MEVE, 2015)
- After a burn, land at Mesa Verde is vulnerable to the establishment of invasive species like thistle and cheatgrass. These species cover the surface with additional dangerous surface fuels for subsequent fires. Seeding the area with native grass is recommended as prevention (Floyd-Hanna, 2012).

Resources:

1. National Park Service, 2009: "Mesa Verde Fire History"
http://www.nps.gov/meve/learn/management/upload/fire_history_09.pdf
2. National Park Service, 2007: "Archaeology and Fire"
http://www.nps.gov/meve/learn/management/upload/arch_fire_effects.pdf
3. National Park Service, 2009: "Prescribed Fire and Hazardous Fuels Reduction at Mesa Verde"
http://www.nps.gov/meve/learn/management/upload/fire_prescribed_09.pdf
4. *Durango Herald*, 5/05/2015: "Cleansing burns recommended in area" by Mary Shinn,
<http://www.durangoherald.com/article/20150505/NEWS01/150509798/Cleansing-burns-recommended-in-area>
5. *High Country News*, 8/28/2000: "Fires burn through boundaries at Mesa Verde" by Michelle Nijhuis, <https://www.hcn.org/issues/184/5974>
6. Search Mesa Verde's news releases for more information on prescribed fires, recent fires, and current mitigation techniques: <http://www.nps.gov/meve/learn/news/newsreleases.htm>

Pre-Visit Questions:

1. What do you know about Mesa Verde National Park?

2. Define the word “stakeholder.” Who are the stakeholders at your school? What are they responsible for? What do they care about?

3. Who are the stakeholders of Mesa Verde National Park are? What are they responsible for? What do they care about?

Mission Statements:

1. What is a mission statement? Does your school have a mission statement? Do you have a personal mission statement? Why would an organization or an individual need a mission statement?

2. Mesa Verde is one of the 58 National Parks managed by the U.S. National Park Service. Their mission is to “preserve unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations. The Park Service cooperates with partners to extend the benefits of natural and cultural resource conservation and outdoor recreation throughout this country and the world.”

Have you visited any National Parks? Which ones? How does the Park Service achieve this mission?

3. Mesa Verde National Park specifically has been tasked with the following mission:

- Preserving and protecting from injury and spoliation sites, artifacts and other works of Ancestral Pueblo peoples;
- Protecting wildlife, birds, and other natural resources from willful destruction, disturbance and removal;
- Managing and protecting the pristine character of designated wilderness on 8,100 acres;
- Provide for research to increase knowledge and aid in the advancement of archeological science;
- Maintaining American Indian rights annuities and benefits that are entitled by law, treaty and executive orders; and
- Protecting the scenery of Point Lookout.

What are the park’s cultural and natural resources? What are the challenges the park might encounter in protecting, preserving and sharing those resources?

4. Mesa Verde National Park is one of over 1,000 designated World Heritage Sites. By providing the designation, UNESCO commits to supporting national and regional governments to protect and preserve these sites. They describe their mission and role in the following way:

“The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, protection and preservation of cultural and natural heritage around the world considered to be of outstanding value to humanity. This is embodied in an international treaty called the Convention concerning the Protection of the World Cultural and Natural Heritage, adopted by UNESCO in 1972.”

Why do you think UNESCO designated Mesa Verde National Park? What role do you think UNESCO plays in park management?

DBQ 1:

President Theodore Roosevelt signed the American Antiquities Act in 1906. Based on your studies of Mesa Verde National Park and its challenges, did the Act go far enough protecting antiquities? Why or why not?

American Antiquities Act, 1906.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That any person who shall appropriate, excavate, injure, or destroy any historic or prehistoric ruin or monument, or any object of antiquity, situated on lands owned or controlled by the Government of the United States, without the permission of the Secretary of the Department of the Government having jurisdiction over the lands on which said antiquities are situated, shall, upon conviction, be fined in a sum of not more than five hundred dollars or be imprisoned for a period of not more than ninety days, or shall suffer both fine and imprisonment, in the discretion of the court.

Sec. 2. That the President of the United States is hereby authorized, in his discretion, to declare by public proclamation historic landmarks, historic and prehistoric structures, and other objects of historic or scientific interest that are situated upon the lands owned or controlled by the Government of the United States to be national monuments, and may reserve as a part thereof parcels of land, the limits of which in all cases shall be confined to the smallest area compatible with proper care and management of the objects to be protected: Provided, That when such objects are situated upon a tract covered by a bona fied unperfected claim or held in private ownership, the tract, or so much thereof as may be necessary for the proper care and management of the object, may be relinquished to the Government, and the Secretary of the Interior is hereby authorized to accept the relinquishment of such tracts in behalf of the Government of the United States.

Sec. 3. That permits for the examination of ruins, the excavation of archaeological sites, and the gathering of objects of antiquity upon the lands under their respective jurisdictions may be granted by the Secretaries of the Interior, Agriculture, and War to institutions which they may deem properly qualified to conduct such examination, excavation, or gathering, subject to such rules and regulation as they may prescribe: Provided, That the examinations, excavations, and gatherings are undertaken for the benefit of reputable museums, universities, colleges, or other recognized scientific or educational institutions, with a view to increasing the knowledge of such objects, and that the gatherings shall be made for permanent preservation in public museums.

Sec. 4. That the Secretaries of the Departments aforesaid shall make and publish from time to time uniform rules and regulations for the purpose of carrying out the provisions of this Act.

Approved, June 8, 1906

DBQ 2:

Carefully read the quote below from a Pueblo historian sharing his perspective about the management and preservation of Mesa Verde National Park. How is this perspective addressed by the National Park Service? Do you agree or disagree with the historian? Why?

“A site is supposed to be left to go back to the earth. Anybody who comes in there, digging for the purpose of knowledge, even though it may be useful in the dominant world, in the field of archaeology, to create new knowledge and expand knowledge, and all of that—in our Pueblo view you’re interrupting that natural process of just having it go back where it came from. So when you have a place like Mesa Verde, for example, with paved trails and constant stabilization, you have people running through the whole place, treating it like a Disneyland, so casual and yet so disruptive, I mean, you’re interfering with the natural process of just going back to Mother Earth. Well, we believe that those places are still inhabited by the spirits. And they’re always going to be there. So when we visit, we go with that perspective, but not to shore it up, or put in concrete to make it like it was. That’s a real interference with the natural process of living and dying, and then interfering with the new life that comes out of there.”

–From Hays-Gilpin, Kelley, and Ramson Lomatewama. 2013. Some contemporary Pueblo perspectives on archaeology in the Pueblo world. *KIVA: The Journal of Southwestern Anthropology and History*, Vol. 78, No. 3 (Spring 2013), pp. 229–246. Copyright © 2013 Arizona Archaeological and Historical Society.