

# PRE-1500

## ASHFALL

# ACTIVITIES

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### RESOURCES

Ashfall, University of Nebraska State Museum

<http://ashfall.unl.edu/>

Nebraska Department of Education Academic Standards

<http://www.nde.state.ne.us/ndestandards/AcademicStandards.htm>

Nebraska Department of Education Social Studies and History Standards

<http://www.nde.state.ne.us/SS/DOCUMENTS/TheHistory-SocialStudiesStandardsPDF.pdf>

National Archives

<http://www.archives.gov/index.html>

Library of Congress Learning Page Lesson Plans

<http://memory.loc.gov/ammem/ndlpedu/lessons/index.html>

Six Trait Writing: Ideas, Organization, Voice, Sentence Fluency, Word Choice, and

Conventions <http://www.edina.k12.mn.us/concord/teacherlinks/sixtraits/sixtraits.html>

## Activity 1: Visiting Ashfall

**Activity Grade Level:**  
4<sup>th</sup> & 8<sup>th</sup> Grades

### Activity: Oral or Written Presentation

Have students read the Ashfall section in the Pre-1500 timeline of Nebraska Studies.

[http://nebraskastudies.org/0200/stories/0201\\_0101.html](http://nebraskastudies.org/0200/stories/0201_0101.html)

Have students pretend you are taking your classmates on a tour of the Ashfall Fossil Beds State Historical Park. They should explain (in a written and/or oral format) what they will see and why it is important. In your classroom, have students post drawings they have created and/or images from this site or other sources of some of the animals that died at Ashfall.

### Nebraska State SOCIAL STUDIES Standards

*By the end of fourth grade, students will:*

**Standard 4.1.7** Use higher level thinking processes to evaluate and analyze primary sources and other resources.

**Standard 4.1.10** Identify and use essential map elements.

**Standard 4.1.11** Use maps and globes to acquire information about people, places, and environments.

**Standard 4.1.12** Identify the geographic and human characteristics of the regions of the United States and Nebraska.

*By the end of eighth grade, students will:*

**Standard 8.4.2** Demonstrate skills for historical analysis.

**Standard 8.4.6** Improve their skills in historical research and geographical analysis.

**Standard 8.4.3** Develop skills in discussion, debate, and persuasive writing by analyzing historical situations and events.

### Nebraska State READING/WRITING Standards

*By the end of fourth grade, students will:*

**Standard 4.1.2** Demonstrate the use of multiple strategies to increase their vocabulary.

**Standard 4.1.3** Identify the main idea and supporting details in what they have read.

**Standard 4.1.4** Identify the resource appropriate for a specific purpose, and use the resource to locate information.

**Standard 4.3.2** Deliver organized oral presentations using complete sentences, clear enunciation, adequate volume, and eye contact.

*By the end of eighth grade, students will:*

**Standard 8.1.2** Identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

**Standard 8.3.2** Use multiple presentation styles for specific audiences and purposes.

### Nebraska State SCIENCE Standards

*By the end of fourth grade, students will:*

**Standard 4.1.2** Develop an understanding of evidence, models, and explanation.

**Standard 4.2.1** Develop the abilities needed to do scientific inquiry.

**Standard 4.8.1** Develop an understanding of science as a human endeavor.

*By the end of eighth grade, students will:*

**Standard 8.1.2** Develop an understanding of evidence, models, and explanation.

**Standard 8.2.1** Develop the abilities needed to do scientific inquiry.

**Standard 8.8.1** Develop an understanding of science as a human endeavor.

## Activity 2: National Geographic

### Activity Grade Level:

4<sup>th</sup> - 8<sup>th</sup> Grades

### Activity: Research & Writing

Have students search the library for the following issue of the National Geographic magazine.  
National Geographic, Volume 1, Number 1, January 1981

Have them read the article, "Pompeii of Prehistoric Animals in Nebraska," on pages 66-75.  
Then have students write a summary of what they consider were the three most important points discussed by Dr. Michael Voorhies.

### Nebraska State SOCIAL STUDIES Standards

*By the end of fourth grade, students will:*

**Standard 4.1.7** Use higher level thinking processes to evaluate and analyze primary sources and other resources.

**Standard 4.2.4** Demonstrate the use of multiple forms to write for different audiences and purposes.

**Standard 4.2.5** Demonstrate the use of self-generated questions, note taking, and summarizing while learning.

*By the end of eighth grade, students will:*

**Standard 8.4.2** Demonstrate skills for historical analysis.

**Standard 8.4.6** Improve their skills in historical research and geographical analysis.

### Nebraska State READING/WRITING Standards

*By the end of fourth grade, students will:*

**Standard 4.1.2** Demonstrate the use of multiple strategies to increase their vocabulary.

**Standard 4.1.3** Identify the main idea and supporting details in what they have read.

*By the end of eighth grade, students will:*

**Standard 8.1.1** Identify the main idea and supporting details in what they have read.

**Standard 8.1.2** Identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

**Standard 8.2.4** Demonstrate the use of multiple forms to write for different audiences and purposes.

### Nebraska State SCIENCE Standards

*By the end of fourth grade, students will:*

**Standard 4.4.3** Develop an understanding of living things and environments.

**Standard 4.8.1** Develop an understanding of science as a human endeavor.

*By the end of eighth grade, students will:*

**Standard 8.4.3** Develop an understanding of regulation and behavior.

**Standard 8.8.1** Develop an understanding of science as a human endeavor.

### Activity 3: Dr. Voorhies Biography

#### Activity Grade Level:

4<sup>th</sup> - 8<sup>th</sup> Grades

#### Activity: Writing

Have students read the Dr. Michael Voorhies' Discovery page in the Ashfall section in the Pre-1500 timeline of Nebraska Studies.

[http://nebraskastudies.org/0200/stories/0201\\_0103.html](http://nebraskastudies.org/0200/stories/0201_0103.html)

Then have them write a biographic article about Dr. Michael Voorhies, paleontologist at the University of Nebraska State Museum. Students may use information from the pages above, including the video stories, or use the University of Nebraska State Museum Ashfall site.

<http://ashfall.unl.edu/>

#### Nebraska State SOCIAL STUDIES Standards

*By the end of fourth grade, students will:*

**Standard 4.1.6** Identify significant individuals, historical events and symbols in their community and in Nebraska and explain their importance.

**Standard 4.1.7** Use higher level thinking processes to evaluate and analyze primary sources and other resources.

*By the end of eighth grade, students will:*

**Standard 8.4.2** Demonstrate skills for historical analysis.

**Standard 8.4.3** Develop skills in discussion, debate, and persuasive writing by analyzing historical situations and events.

**Standard 8.4.6** Improve their skills in historical research and geographical analysis.

#### Nebraska State READING/WRITING Standards

*By the end of fourth grade, students will:*

**Standard 4.1.3** Identify the main idea and supporting details in what they have read.

**Standard 4.1.4** Identify the resource appropriate for a specific purpose, and use the resource to locate information.

**Standard 4.1.8** Identify similarities and differences between two fourth grade level reading selections.

**Standard 4.2.5** Demonstrate the use of self-generated questions, note taking, and summarizing while learning.

*By the end of eighth grade, students will:*

**Standard 8.1.1** Identify the main idea and supporting details in what they have read.

**Standard 8.1.2** Identify, locate, and use multiple resources to access information on an assigned or self-selected topic.

**Standard 8.1.6** Identify similarities and differences across a variety of eighth grade reading selections.

**Standard 8.2.5** Demonstrate the ability to use self-generated questions, note taking, summarizing and outlining while learning.

#### Nebraska State SCIENCE Standards

*By the end of fourth grade, students will:*

**Standard 4.1.2** Develop an understanding of evidence, models, and explanation.

**Standard 4.2.1** Develop the abilities needed to do scientific inquiry.

**Standard 4.8.1** Develop an understanding of science as a human endeavor.

*By the end of eighth grade, students will:*

**Standard 8.1.2** Develop an understanding of evidence, models, and explanation.

**Standard 8.2.1** Develop the abilities needed to do scientific inquiry.

**Standard 8.8.1** Develop an understanding of science as a human endeavor.

## Activity 4: Virtual Reality Zoo

**Activity Grade Level:**  
12<sup>th</sup> Grade

### Activity: Class Project

Have students read the Ashfall section in the Pre-1500 timeline of Nebraska Studies.

[http://nebraskastudies.org/0200/stories/0201\\_0101.html](http://nebraskastudies.org/0200/stories/0201_0101.html)

Then, have students suppose their class has just received a financial grant from the Smithsonian Institute to create a virtual reality zoo that contains prehistoric animals that died at Ashfall. Through a cooperative endeavor, determine the director of the virtual reality zoo and what assignments each class member will have. Here is a partial listing of tasks:

- Put person or persons in charge of publicity.
- Assign technology experts.
- Secure images of prehistoric animals and provide brief biographical sketches of each.
- Design architecture of the zoo that creates a physical structure that will provide security for the animals and human visitors.
- Consider geographic location parameters.

Assign students to:

- Do the research.
- Write the script.
- Create the visual images and audio components.
- Conduct interviews with experts such as current zoo directors, noted paleontologists such as Dr. Michael Voorhies, computer specialists, etc.

### Nebraska State SOCIAL STUDIES Standards

*By the end of twelfth grade, students will:*

**Standard 12.2.11** Demonstrate historical research and geographical skills.

**Standard 12.3.17** Develop skills for historical analysis.

### Nebraska State READING/WRITING Standards

*By the end of twelfth grade, students will:*

**Standard 12.1.1** Identify the main idea and supporting details in what they have read.

**Standard 12.2.4** Use multiple forms to write for different audiences and purposes.

**Standard 12.2.5** Demonstrate the ability to use self-generated questions, note taking, summarizing, and outlining while learning.

**Standard 12.3.2** Make oral presentations that demonstrate consideration of audience, purpose, and information.

### Nebraska State SCIENCE Standards

*By the end of twelfth grade, students will:*

**Standard 12.2.1** Develop the abilities needed to do scientific inquiry.

**Standard 12.4.4** Develop an understanding of the interdependence of organisms.

**Standard 12.4.6** Develop an understanding of the behavior of organisms.

## Activity 5: Ashfall Tourism

**Activity Grade Level:**  
12<sup>th</sup> Grade

### Activity: Writing

Have students read the Ashfall section in the Pre-1500 timeline of Nebraska Studies.

[http://nebraskastudies.org/0200/stories/0201\\_0101.html](http://nebraskastudies.org/0200/stories/0201_0101.html)

Have students assume they are the director of tourism for the state of Nebraska and have been instructed to develop a PowerPoint presentation that will be used to encourage potential tourists from other states to visit the Ashfall Fossil Beds. The title of the presentation will be *A Safari Back in Time*. Include the following in the PowerPoint presentation:

1. a brief introduction that includes background information on Ashfall
2. images of the animals that died at Ashfall and a brief biographical sketch of each animal
3. the archaeological significance of Ashfall
4. the significance of the discovery of Ashfall
5. a map showing the present geographic location
6. a time line

### Nebraska State SOCIAL STUDIES Standards

*By the end of twelfth grade, students will:*

**Standard 12.2.11** Demonstrate historical research and geographical skills.

**Standard 12.3.17** Develop skills for historical analysis.

### Nebraska State READING/WRITING Standards

*By the end of twelfth grade, students will:*

**Standard 12.1.1** Identify the main idea and supporting details in what they have read.

**Standard 12.2.4** Use multiple forms to write for different audiences and purposes.

**Standard 12.2.5** Demonstrate the ability to use self-generated questions, note taking, summarizing, and outlining while learning.

**Standard 12.3.2** Make oral presentations that demonstrate consideration of audience, purpose, and information.

### Nebraska State SCIENCE Standards

*By the end of twelfth grade, students will:*

**Standard 12.2.1** Develop the abilities needed to do scientific inquiry.

**Standard 12.4.4** Develop an understanding of the interdependence of organisms.

**Standard 12.4.6** Develop an understanding of the behavior of organisms.