

National Park Service WebQuest:

The National Mall

The attention of the entire world is often focused on Washington, D.C. during times of national crisis and times of national achievement. For example, on January 20th, 2009, an estimated 1.5 million people gathered together in the National Mall to witness the inauguration of the 44th president of the United States, Barack Obama. Let's look closely at this historic national park and explore the geology and history of the National Mall. As you explore the Mall, you will discover how the many quarried stones not only provide the building blocks of each structure, but also strengthens the themes and ideas which are representative of the monuments and memorials as well.

- To begin, select the following link to enter the Views of the National Parks (Views) website: <http://www.nature.nps.gov/views/>
- Select the "**Explore Views**" button to get to the Views homepage.
- Select the "**National Mall**" to enter the module.
- From the main page, select "**Welcome**" from the top tool bar.
- Watch the "**Introductory Video**" and then answer the following question:

Questions: Introductory Video

1. The National Mall is located in _____
where large stone monuments and memorials honor important historical
_____ and _____.
2. What is it called when you look at both the geology and history of a place?

3. When you are done watching the introductory video, close the video window and answer the following question:

Why do you think it would be more beneficial to study the geology and history of a place together, rather than study them separately?

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- Select "**Geostory**" from top tool bar.
 - Select "**Geology of the Area**" from the options on the right.
 - Read the information on the 4 pages and then answer the following questions:

Questions: Geology of the Area

1. What is geology?

2. What are the names for the 3 types of rocks?

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- Select "**Making History Happen**" from the options on the right.
 - Read the information on the 4 pages and then answer the following question:

Questions: Making History Happen

1. How did the geology of the land influence the location of our nation's capital?

a.

b.

- Select the "**City development**" button next to "Making History Happen", read the information, and then answer the following questions:

1. When European settlers claimed the area, they cleared fields for farming and grazing, and cut down trees and gathered materials to make buildings and bridges. Farms and domesticated animals, and later city streets and buildings, took over the existing natural habitat. What happened to the plants, animals, and waterways of the area as the city of Washington, D.C. developed?

Select each topic below and explain the effects that development had on them, and if applicable, include what species lived in the area before and after the settlement.

a. Plants:

b. Animals:

c. Waterways:

- Select the "**D.C.'s foundation**" button next to "Making History Happen." Read the information, and then answer the following question:
 1. What type of rock forms the foundation of The White House and the U.S. Capitol building? Where is the rock from?

2. What type of rock makes up the rest of The White House and The Capitol? Where is the rock from?

- Select "**The Capitol**" button next to "D.C.'s foundation." Read the information, and then answer the following question:

1. Who meets in The Capitol building and what do they do?

- Select "**The White House**" button next to "D.C.'s foundation." Read the information, and then answer the following question:

1. What were 3 names for The White house before it was officially named in 1901?

- Select the "**City With a Watery Past**" button from the far right toolbar, read the information, and then answer the following question:

1. Why wasn't the Washington Monument built in the symbolic center of the National Mall?

- Select the "**Jefferson Pier Stone**" button next to "City with a watery past." Read the information, and then answer the following question:

1. What does the Jefferson Pier Stone represent and what does it have to do with the Washington Monument?

2. The current prime meridian (0° longitude) is in Greenwich, U.K. However, in 1804 Thomas Jefferson proposed that the “first meridian” be located in Washington, D.C. Why did he wish this?
- Select the “**Washington City Canal**” button next to “City with a watery past.” Read the information, and then answer the following question:
 1. Several small streams in Washington, D.C. were turned into a system of canals that connected the Washington Waterfront, the Capitol, the White House and other areas downtown with the C&O Canal’s first lock in Georgetown. What was the purpose of the canals and locks?
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In Your Own Words...

Answer the following question in your own words and use specific examples regarding the geology, construction, and history of the National Mall to support your answer. If you need to, look back through the module for examples.

1. Think about the geology of the building materials used in all the monuments and memorials and answer the question below:

Why is the geology of the buildings and monuments in the National Mall symbolic of the United States government itself?

ANSWER KEY

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The attention of the entire world is often focused on Washington, D.C. during times of national crisis and times of national achievement. For example, on January 20th, 2009, an estimated 1.5 million people gathered together in the National Mall to witness the inauguration of the 44th president of the United States, Barack Obama. Let's look closely at this historic national park and explore the geology and history of the National Mall. As you explore the Mall, you will discover how the many quarried stones not only provide the building blocks of each structure, but also strengthens the themes and ideas which are representative of the monuments and memorials as well.

- To begin, select the following link to enter the Views of the National Parks (Views) website: <http://www.nature.nps.gov/views/>
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- Select the "**National Mall**" to enter the module.
- From the main page, select "**Welcome**" from the top tool bar.
- Watch the "**Introductory Video**" and then answer the following question:

Questions: Introductory Video

1. The National Mall is located in Washington D.C.
where large stone monuments and memorials honor important historical
people and events.
2. What is it called when you look at both the geology and history of a place?

GeoStory

3. When you are done watching the introductory video, close the video window and answer the following question:

Why do you think it would be more beneficial to study the geology and history of a place together, rather than study them separately?

-
- Select "**Geostory**" from top tool bar.
 - Select "**Geology of the Area**" from the options on the right.
 - Read the information on the 4 pages and then answer the following questions:

Questions: Geology of the Area

1. What is geology?

Geology is the study of rocks, how they form, and the processes that shape the Earth.

2. What are the names for the 3 types of rocks?

Sedimentary, Igneous, and Metamorphic

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- Select "**Making History Happen**" from the options on the right.
 - Read the information on the 4 pages and then answer the following question:

Questions: Making History Happen

1. How did the geology of the land influence the location of our nation's capital?
 - a. **The geology of the area created flat land that was good for farming and building.**
 - b. **The Potomac River was nearby and would connect the new city to other rivers for trade and transportation.**
- Select the "**City development**" button next to "Making History Happen", read the information, and then answer the following questions:
 1. When European settlers claimed the area, they cleared fields for farming and grazing, and cut down trees and gathered materials to make buildings and bridges. Farms and domesticated animals, and later city streets and buildings, took over the existing natural habitat. What happened to the plants, animals, and waterways of the area as the city of Washington, D.C. developed?

Select each topic below and explain the effects that development had on them, and if applicable, include what species lived in the area before and after the settlement.

- a. Plants:

The Potomac River shoreline used to be a swampy, wild area dominated by plants like cattails, wild rice, and green willow trees. When the settlers moved in, the forests were cleared, hills leveled, and swamps and mudflats were eventually filled in. Most native plants were removed to make room for development and landscaping with decorative trees and plants from other places. What once was forest and swampland is now a combination of manicured green lawns, beautifully landscaped flower gardens, and long straight rows of elms, oaks, and poplars that shade sidewalks and streets.

b. Animals:

Natural habitats were been destroyed with the development of the city. Washington, DC is no longer home to bears or mountain lions, but an abundance of wildlife is still found in the city. So far, 111 bird, 12 mammal, 23 fish, and 2 reptile species have been documented either as residents within park boundaries or migrants passing through. Local predators include fox, osprey, red-tailed hawks, and occasionally bald eagles. Other residents of the Mall include bats, butterflies, dragonflies, mosquitoes, wasps, raccoons, opossum, migratory songbirds, waterfowl, pigeons, squirrels, mice, and rats. In addition to the mammals and birds, Constitution Gardens Lake, the Tidal Basin, and other ornamental pools provide habitat for a variety of fish.

c. Waterways:

Development of Washington, DC altered the watershed of the Potomac River in many ways through erosion, sedimentation, and reclamation. What began as swampland, farms, and large piles of river mud has become one of the most recognized capital cities in the world.

- Select the "**D.C.'s foundation**" button next to "Making History Happen." Read the information, and then answer the following question:
 1. What type of rock forms the foundation of The White House and the U.S. Capitol building? Where is the rock from?

Hard, metamorphic rock from Little Falls, Maryland.

2. What type of rock makes up the rest of The White House and The Capitol? Where is the rock from?

Softer, sedimentary rock called Aquia Creek sandstone from Virginia.

- Select "**The Capitol**" button next to "D.C.'s foundation." Read the information, and then answer the following question:

1. Who meets in The Capitol building and what do they do?

Senators and Representatives meet to make laws.

- Select "**The White House**" button next to "D.C.'s foundation." Read the information, and then answer the following question:

1. What were 3 names for The White house before it was officially named in 1901?

Presidents House, President's Palace, Executive Mansion

- Select the "**City With a Watery Past**" button from the far right toolbar, read the information, and then answer the following question:

1. Why wasn't the Washington Monument built in the symbolic center of the National Mall?

A structure that large would have toppled into the Potomac River.

- Select the "**Jefferson Pier Stone**" button next to "City with a watery past." Read the information, and then answer the following question:

1. What does the Jefferson Pier Stone represent and what does it have to do with the Washington Monument?

The stone represents a meridian system used to align city streets and development. The original marker aided surveyors and later served as a benchmark during construction of the Washington Monument.

2. The current prime meridian (0° longitude) is in Greenwich, U.K. However, in 1804 Thomas Jefferson proposed that the “first meridian” be located in Washington, D.C. Why did he wish this?

He wished for the United States to become scientifically as well as politically independent from Europe.

- Select the “**Washington City Canal**” button next to “City with a watery past.” Read the information, and then answer the following question:

1. Several small streams in Washington, D.C. were turned into a system of canals that connected the Washington Waterfront, the Capitol, the White House and other areas downtown with the C&O Canal’s first lock in Georgetown. What was the purpose of the canals and locks?

It was much easier to ship things via water, and the canals and locks moved ships upstream of Georgetown where the Coastal Plain ends and the river course becomes rocky and steep.

In Your Own Words...

Answer the following question in your own words and use specific examples regarding the geology, construction, and history of the National Mall to support your answer. If you need to, look back through the module for examples.

1. Think about the geology of the building materials used in all the monuments and memorials and answer the question below:

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