Greek Architecture
Influences
America’s Architecture

Designed and Created
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CEP 817
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** PowerPoint notes contain Web site notations.
What is Architecture?

**Architecture (Noun)**

- *Is the art and science of designing buildings.*

- *The discipline dealing with the principles of design and construction and ornamentation of fine buildings;*

- *The profession of designing buildings and environments with consideration for their esthetic effect.*
Architectural Terms

- **Cornice** is the set of crowning moldings that cap an entablature in Classical architecture.
- The Doric order is characterized by the series of **triglyphs** and **metopes** on the entablature.
- Each **metope** was occupied by a panel of relief sculpture.
- **Architrave**: The word is derived from the Greek word for *main beam*.
- **Capital**: The topmost element of the column, helps to transfer loads from beams to columns.
- **Shaft**: The long round section of a column between the base and the capital.
Brief History

• Ancient Greece is considered by most historians to be the cultural foundation of Western Civilization.

• Greek culture was a powerful influence in the Roman Empire, which carried a version of it to many parts of Europe.

• Ancient Greek civilization has been immensely influential on the language, politics, educational systems, philosophy, art and architecture of the modern world.

• The Roman Empire's influence on government, law, and monumental architecture, as well as many other aspects of Western life remains visible today.
Architectural Influences

(Select an area of interest and explore.)

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Doric Architecture

- The Doric style is rather sturdy and its top (the capital), is plain.
- The columns are fluted.
- This style was used in mainland Greece and the colonies in southern Italy and Sicily.
Doric Architecture

In Doric columns:
- On the architrave, there are **triglyphs** and **metopes**.
- At the top of the columns, there's a **capital** made of a sort of small pillow in stone, and then a square block, under the architrave.
- The columns have no base, but just sit right on the floor.
Doric Architecture in America

Doric Columns used on the porch of a house.

Justice Hall, New York City, New York
Ionic Architecture

- The Ionic style is thinner and more elegant.
- The **capital** is decorated with a scroll-like design (a volute).
- This style was found in eastern Greece and the islands.
In Ionic columns:

• At the top of the columns, there's a double curve in stone, under the architrave.

• They are still **fluted**, but they have more flutes than Doric columns.

• The columns have a small base to stand on, instead of sitting right on the floor.
Ionic Architecture in America

Garden Statuary, Stockbridge, MA

Residence Mason, Michigan
Corinthian Architecture

- The Corinthian style is seldom used in the Greek world, but often seen on Roman temples.
- The capital is very elaborate and decorated with acanthus leaves.
In Corinthian columns:

- On the architrave, as in Ionic temples, there is a continuous frieze where the triglyphs and metopes would be on a Doric temple.

- At the top of the columns, on the capital, there's a stone carving of acanthus leaves, under the architrave.

- The columns have a fancier base to stand on.
Corinthian Architecture in America

New York University, Hall of Fame Terrace, New York

Duveen's Gallery, New York City, NY
Corinthian Architecture in America

Corinthian column used on outside portico (porch) of:
State Of Michigan Capital Building.

Blue Prints Drawing;
1865

State of Michigan Capital Building,
Lansing, MI
Completed in 1879
Corinthian Architecture in America

State of Michigan Capital Building, Lansing, MI 1879
Corinthian Architecture in America

Capital Building, Washington, D.C.

Under the pediment, looking upward at the coffered (decorative, sunken panel) ceiling, outside the Capital Building, Washington, D.C.
Amphitheaters

- Amphi- means "around" in Greek.
- Amphi-theatres are "theatres in the round"
- The amphitheatre was the place where people went to see fights. These fights were between slaves, prisoners of war or criminals, and sometimes wild animals
- They were usually outdoor arenas where people watched sporting events and plays.
Amphitheaters in America

Michigan State University, Stadium

Arlington, Virginia
Theaters

- The theater was shaped with a half circle or orchestra space in front of the stage.
- The structure was built into a hillside and the wall behind the stage structure was relatively low.
- To solve the problem of lighting and sound - the theaters were outdoors.
- Dodoni was a vital center from about 2000 BC and flourished well into the Roman times.

Dodoni Ancient Greek Theater, Northwest Greece
Greek Theater Formation

- **Orchestra**: The orchestra (literally, "dancing space") was normally circular.
- **Theatron**: The theatron (literally, "viewing-place") is where the spectators sat.
- **Skene**: The skene (literally, "tent") was the building directly behind the stage.
- **Parodos**: The parodoi (literally, "passageways") are the paths by which the chorus and some actors made their entrances and exits.
Theaters - American

Boston Pops, Massachusetts
Arches

• An arch is a curved structure capable of spanning a space while supporting significant weight.

• The arch was developed in Ancient Greece and later refined in Ancient Rome.

• Arches were used by for underground structures such as drains and vaults.

• The ancient Romans were the first to use them widely above ground.
Arches in America

Public Library, interior
1897
New York

Union Station, interior
1908
Washington, DC
Roman monuments were constructed using the arch and had the details carved into them.

The arch was usually very big and was a prominent feature of the skyline of the town in which it was located.

Arch of Constantine 315 A.D.
Monuments in America

General Grant National Memorial, New York, 1897

Plymouth Rock, Canopy over rock, Plymouth, MA
Aqueducts

- Aqueducts provided water for people in a town or village.

- The Greek had underground canals and galleries, hewn out of the rock to lead the water to dry pastures.

- The Romans were the first to construct aqueducts the way we know them:
  - a line of arches joined together, with a channel on the top to carry water.

- The Romans did not build aqueducts in Italy only, but also in Germany, France, Spain, and Turkey.
Closed pipes were occasionally used to cross valleys by the "inverted syphon" method.

- The pressure forced the water down and up again on the other side, to a level slightly lower than before.
Aqueducts in America

Cabin John Bridge, Washington Aqueduct, Washington, DC, 1852

Croton Aqueduct, New York City, NY, 1842
• Provide clean water to the growing city.
Bath Houses

- Aqueducts provided the water to the public baths.
- Heated and cooled baths.
- Dirty water was replaced with clean water.
- Exercise and message rooms were available.
The system the Romans had for maintaining their baths. In the cold and hot areas, the water temperature was actually regulated by the use of underground fire furnaces.
Baths Houses in America

Bath houses – Spas provide:

- Skin Care
- Mud Baths
- Salt Scrubs
- Body Wraps
- Herbal Baths
- Mineral Baths
- Aromatherapy
- Exercise room
- Facial Treatment
- Message Therapy
Summary

• Greeks and Romans influenced the world’s architecture.

• Notice the similarities of the architecture between the continents.
  – Arches – developing strong support for Bridges
  – Monuments - honoring
  – Health Spas / Bath Houses
  – Buildings - National, Offices, Houses,
  – Aqueducts – bringing water to areas in need

• Travel East, across the Atlantic Ocean and visit Rome, Italy.

• What similarities did you notice?