

Architecture Overview and Activities

What is architecture?

As defined by Merriam-Webster *architecture* is:

1. the art or science of building, specifically: the art or practice of designing and building structures and especially habitable ones.
2. a: formation or construction resulting from or as if from a conscious act (the architecture of the garden) b: a unifying or coherent form or structure (the novel lacks architecture)
3. architectural product or work.
4. a method or style of building.
5. the manner in which the components of a computer or computer system are organized and integrated

Architectural style refers to the visual appearance of a building and not its function. Style is often influenced by values and aspirations held by a society or a community. Certain designs may serve as metaphors or symbols of what a particular group of people value, of what they consider important. For example, when the Pilgrims first settled in Massachusetts in 1620 they built structures that served their immediate needs: shelter and places of worship. Creating these particular buildings reflected their collective desire for a new home (building a house creates a feeling of permanence and stability) and freedom to worship as they liked. As more people settled in America they brought their own cultural styles and ideas which have continued to influence architectural design.

Who Builds Great Buildings?

Most of the world's great buildings have been designed by architects. But there are many other buildings, including many homes, which were built by builders with no architectural training. These builders have sometimes used published plans created by architects or have created their own. Architects are often the "inventors" of great architectural innovations and unique designs while others may simply *adapt* various ideas.

The most famous Maine architect is John Calvin Stevens. He was the creator of the Shingle Style and designed many Maine homes during the late 19th and early 20th centuries.

Other Maine architects from around the same period include:

Charles G. Bryant who designed Mt. Hope Cemetery; Fred L. Savage and William R. Emerson who separately designed many buildings on Mount Desert Island; Henry Rowe; and Frederick A. Thompson.

Some recent designs you may know:

The Bangor Auditorium and Civic Center designed by Eaton Tarbell, The Bangor Police Station designed by WBRC Architects, Old Town Elementary School designed by PDT Architects, and The Maine Discovery Museum designed by Lewis and Malm Architects.

What's it like to be an architect?

Architects design houses and buildings. They plan offices and apartments. They design schools, churches, and airport terminals. Their plans involve far more than a building's looks. Buildings must be safe and strong. They must also suit the needs of the people who use them. Architects look at all these things.

The architect and client first discuss what the client wants. The architect sometimes helps decide if a project would work at all or if it would harm the environment. The architect then creates drawings for the client to review. They may be involved in all stages of the construction of a building.

If the ideas are OK, the architect draws up the final plans. These plans show how the building will look and how to build it. The drawings show the beams that hold up the building. They show the air-conditioner, furnace, and ventilating systems. The drawings show how the electricity and plumbing work. Architects used to use pencil and paper to draw their plans. Today, more and more architects are using computers. Architects generally work in comfortable conditions. They spend most of their time in offices. However, they spend some time at building sites to see how projects are going.

Architects may feel stressed sometimes. They might work nights and weekends to meet deadlines. Most architects work 40 hours a week, but they may need to work nights and weekends in order to meet deadlines.

How do you become an architect?

Architects must be licensed before they can practice. In order to get a license: 1) You need a degree in architecture. Courses include architectural theory, building design, math, and science. 2) You must finish an internship. 3) Finally, you must pass all sections of a license exam. Architects sometimes take new classes to keep their skills fresh.

Architects must be able to visualize things and communicate well visually. Art classes are very helpful in doing this. Speaking, writing, and creativity are also important. Architects should be computer literate.

What are other similar jobs?

Construction managers

Civil engineers

Designers (commercial and industrial designers, interior designers, graphic designers)

Landscape architects

Urban planners

-U.S. Department of Labor, Bureau of Labor Statistics

Types of Architecture

Alan Gowans, Professor of History of Art at the University of Victoria, British Columbia categorizes basic architectural types into ten categories.

1. Monument and Tomb

Commemorates the past of a society such as the Iwo Jima Monument at Arlington National Cemetery or the Luther H. Peirce Memorial next to the Bangor Public Library.

2. Shrine and Sanctuary

A place of ceremonies and rituals, binding a community together, such as the National Cathedral in Washington, D.C., or your hometown church or synagogue.

3. Wall and Fort

Protection against attacks, such as the Great Wall of China or the Tower of London, a military barracks, or an armory.

4. Shelter

Basic protection against the elements; a barn for animals, bus shelter, or grain silo.

5. Homestead

A place to raise a family; your family's house. An essential element of a homestead is the hearth.

6. Palace

A living and working space for rulers such as Buckingham Palace, Versailles, or the White House; a place where government meets the people.

7. Public Works

Foundations of civilized life, such as windmills, roads, bridges, water works, the railroads and subways, airport terminals etc.

8. Mansion

A large homestead, often to include servants. These are built by wealthy individuals to proclaim superior social status, such as the Vanderbilt home in New York City, the Victoria Mansion in Portland, or a large Southern plantation. Included in the Mansion category is the apartment house, and hotels.

9. Shops and Offices

Facilities for distributing goods or services, such as a corner store to the Bangor Mall, or Moody's Diner to Hannaford's.

10. Amenities

Places for community welfare and recreation, such as hospitals, orphanages, libraries, museums, institutional housing such as nursing homes, fairgrounds, or a union hall.

Activities

Take each of the following and categorize them according to the previous list. You may not agree that certain structures belong in the categories that Gowans has created, but categorizing buildings will help you to think about them and their functions. You may have to do a little research first!

Your school _____

Your home _____

Your corner drug store _____

A farm's barn _____

The Paul Bunyan statue by the Bangor Auditorium _____

The State Capital Building in Augusta _____

St. Peter and St. Paul's Cathedral in Lewiston _____

The Alamo _____

The Breakers in Newport, Rhodes Island _____

Grand Central Station in New York City _____

Teachers: Answers are on page 9.

Can you think of other buildings?

Make a list of ten other buildings you can think of and categorize them into this list.

- 1. _____
- 2. _____
- 3. _____
- 4. _____
- 5. _____
- 6. _____
- 7. _____
- 8. _____
- 9. _____
- 10. _____

Values

In American society today, are some building types more important than others? Try listing 1-10 in the order of importance to you (1 being the *most* important). This list will tell you something about your values — what you consider most important and least important.

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

Periods in Architecture

Note: While some periods may also refer to style, others may encompass several styles. For example, Antebellum is a period before the Civil War and would technically include all the structures built during the years just before 1861. This might include Federal, Greek Revival, Renaissance Revival, etc. The term "colonial" is often used by real estate agents to loosely refer to many houses of differing styles, but usually built before World War II and featuring 18th century motifs such as shutters. And remember that "style" refers to visual appearance and not function.

Colonial Pre-1776

Late-Medieval

The Late-Medieval style was originally developed in England between 1558 and 1625 and is characterized by steeply pitched roof, tall, massive chimneys, and small leaded casements (windows). Example: House of the Seven Gables. Originally built in 1668 the house was small with few rooms. Over the years with several additions, the house eventually grew to have 4-5 gables and 17 rooms. Nathaniel Hawthorne was related to one-time owners of the home and its gables inspired him to write the book *House of the Seven Gables* in 1851. When the house was being renovated in the early 20th century it was decided to "restore" the house to be more reflective of the novel than of the house as it was when Hawthorne visited. Thus, the house acquired seven gables rather than 4 or 5.

Georgian

This style was named for King George III of England and first seen in the United States in 1700 with the construction of the Wren Building in Williamsburg, Virginia. Georgian style is characterized by rigid symmetry, centrally located entrances, geometrical proportions, hipped roofs, and sash (double-hung) windows. Georgian homes are often two stories, four over four rooms. A single-story Georgian home is also referred to as a "Cape Cod." Georgian architecture reflected 16th century Renaissance ideals which were themselves influenced by classical Roman forms. The Palladian window, named for Italian architect Palladio, was sometimes a prominent feature of Georgian homes. This feature continued in the Federal period and it is sometimes difficult to tell the difference between the styles.

Federal 1790-1815

Federal architecture was created by two English brothers as a more decorative adaptation of Georgian style. It is characterized by a square or rectangular shape, with low hipped roofs and frequently three stories, Federal houses can be found in abundance throughout New England. Columns found in Federal structures are often simpler than those in Georgian styles. Windows were often oval or fan-shaped and rooms were similarly shaped. Example: Woodlawn (The Black House) in Ellsworth, Maine.

Greek Revival 1790 – 1860 (height 1820-1860)

Greek Revival structures often featured moldings on the exterior and interior, heavy cornices, horizontal transoms above the entrance, and columns. As in Greek architecture these American versions had angular forms and not the arches or fan windows found in Federal style buildings. Inspired by the marble from Greek buildings, they were often painted white. Ironically Greek temples were originally painted with bright colors and only with the passing of time have they become monochromatic. Greek Revival style was a metaphor for American democratic ideals, meant to convey the American philosophical heritage of the first great democratic society. The United States Treasury Building in Washington, D.C.

Renaissance Revival 1845 – 1885 & 1890 – 1915

Example: The Breakers in Newport, RI

Gothic Revival 1825 – 1870

Gothic Revival style marked a time when Americans had begun to grow weary of the rigid Greek forms. They were also reading novels by Sir Walter Scott who wrote romantic books about the Middle Ages. Gothic Revival style reflected these attitudes by referencing elaborate medieval architecture. These structures were often made of stone or brick and included steeply pitched roofs, pointed windows with decorative details (sometimes made of stained glass), grouped chimneys, quatrefoil (four-sided clover) shaped windows, single-story entry porches, and small spires on roofs. More elaborate versions might include gargoyles, towers, and abundant detail. As building with stone was costly, most masonry versions were public buildings and churches and not private homes. Those that were private homes, sometimes referred to as Gothic Cottages or Carpenter Gothic, were often framed with wood and located in rural areas.

The most famous example of Gothic Revival architecture in the United States is Lyndhurst, an all-marble estate in Tarrytown, New York. The architect, Alexander Jackson Davis, published a book that inspired other Americans to build in the Gothic Revival style. After the Civil War, a related style, High Victorian Gothic, grew out of the Gothic Revival movement. Later another version, called "Collegiate Gothic," was used in the buildings at Princeton and other universities.

Italianate 1850 – 1890

Becoming popular in America in the 1850s, Italianate houses drew their inspiration from villas in northern Italy. They are squarish in shape, have low-pitched hipped roofs, large windows, and broad overhanging eaves. They often feature decorative brackets, entrance tower, hooded moldings around windows, corner quoins, arcaded porches, and balustraded balconies. Example: The Victoria Mansion in Portland, and Osborne House on the Isle of Wight.

French Second Empire 1870 – 1895

Inspired by Napoleon III's civic transformations in Paris, this style came to America by way of France and England. Its most noticeable feature was the Mansard roof. Example: Renwick Gallery in Washington, D.C. Second Empire buildings may also have dormered windows,

Victorian Vernacular 1870 – 1895

Queen Anne 1874-1910

Although Queen Anne ruled England in the 18th century, her name conjured images of elegance and grandeur into later centuries and was thus chosen to represent this popular high Victorian style. Developed in Great Britain and displayed at the Centennial exposition in Philadelphia, the style is characterized by great complexity and eclecticism. These houses were often irregular in construction with contrasting materials such as brick or stone on the first floor and upper floors of stucco, clapboard, or shingles. Sometimes these buildings had corner turrets and massive medieval chimneys. The layout of interior rooms was much less symmetrical in Queen Anne style homes and often contained dark woods, a departure from plaster and wallpapers of the past. Additionally, Queen Anne houses often had wide front porches, bay windows, and steep roofs.

Shingle 1880 – 1910

Shingle Style houses can take on many forms. Some have tall turrets, suggestive of Queen Anne architecture. Some have gambrel roofs, Palladian windows, and other Colonial Revival details. Some Shingle houses have features borrowed from Tudor, Gothic and Stick styles. But, unlike those styles, Shingle architecture is relaxed and informal. Shingle houses do not have the lavish decorations that were popular during the Victorian era.

The architectural historian Vincent Scully coined the term "Shingle Style" because these homes are usually sided in rustic cedar shingles. However, not all Shingle Style houses are shingle-sided. You will recognize them by their complicated shapes and rambling, informal floor plans.

A shingled home does not stand on ceremony. It blends into the landscape of wooded lots. Wide, shady porches encourage lazy afternoons in rocking chairs. The roughhewn siding and the rambling shape suggest that the house was thrown together without fuss or fanfare.

In Victorian days, shingles were often used as ornamentation on houses in the Queen Anne and other fancy styles. But Henry Hobson Richardson, Charles McKim, Stanford White and even Frank Lloyd Wright began to experiment with shingle siding. They used natural colors and informal compositions to suggest the rustic homes of New England settlers. By covering most or all of a building with shingles stained a single color, architects created an uniform, unembellished surface. Monotoned and unornamented, these homes celebrated the honesty of form, the purity of line.

Shingle Style homes usually have these features:

Continuous wood shingles on siding and roof, irregular roof line, cross gables, eaves on several levels, porches, and an asymmetrical floor plan.

Some Shingle Style homes may also have these features:

Wavy wall surface, patterned shingles, squat half-towers, Palladian windows, rough-hewn stone on lower stories, and stone arches over windows and porches.

Neo-Classical

This style became wildly popular at the end of the 1800s and the beginning of the 1900s. It was inspired by the mammoth White City of the 1893 World's Columbian Exposition in Chicago. Its most distinctive feature would be the lavish use of columns, usually Corinthian. Often features a classical pedimented entry with an entablature above the cornice line. Many Neoclassical buildings have windows grouped in twos or threes, with the main floor having semicircular arched windows.

Richardsonian Romanesque 1880 – 1900

Chateau 1880 – 1905

Swiss Chalet 1885 – 1910

Colonial Revival 1895 – 1930

The Colonial Revival style became popular in the late nineteenth century. It draws its inspiration from Georgian Colonial architecture. Buildings of this type have strictly symmetrical facades and are usually rectangular in plan with no or minimum projections. Eaves have classical detailing. Windows are usually double-hung sash except when Palladian windows are used for accent. The first house of this type appeared in Newport, Rhode Island in 1885-86.

Prairie 1905 – 1930

Craftsman 1910 – 1940

Bungalows were designed by the British for use in colonial India. Therefore, they are fashioned for warm weather. The roofs are hipped, thereby providing large attics for storage and for capturing the heat in the summer. Windows are grouped for greater sunlight and for greater ventilation. Bungalows have broad overhanging eaves, again to hold off the heat, as well as big porches to sit on in the evening. The **Craftsman** style, of which Bungalows are a subset, is characterized by simplicity and lack of the fanciful ornamentation one finds in Victorian homes. The Ratcliffe-Otterbourg House is an excellent local example of a Craftsman Bungalow.

Tudor Revival 1910 – 1940

Tudor Revival derives its inspiration from early England. These buildings lavishly feature stone, ornate chimneys, half-timberings, thick walls, dark interiors, and steep rooflines.

Spanish Mission 1910 – 1940

Art Deco and Moderne 1930 - 1950

Other resources:

<http://www.yale.edu/opa/v33.n13/story7.html>

Interesting interview with Vincent Scully on Architecture

http://www.metropolismag.com/html/content_1201/scu/index.html

Vincent Scully on the Twin Towers

Answers to Categories

Your school (10)

Your home (5)

Your corner drug store (9)

A farm's barn (4)

The Paul Bunyan statue by the Bangor Auditorium (1)

The State Capital Building in Augusta (6)

St. Peter and St. Paul's Cathedral in Lewiston (2)

The Alamo (3)

The Breakers in Newport, Rhodes Island (8)

Grand Central Station in New York City (7)