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ABOUT THE EXPERIENCENTER

The Experiencenter is an award-winning educational gallery that was established in 1976 to provide formal and informal learning and recreational activities for children and their families. It also serves the first time museum visitor by providing a program of active participation in a relaxed museum setting. In addition to being a self-contained gallery space, the Experiencenter encourages visitors to continue their exploration throughout the museum using the Smartour audio guide and the family gallery bag of games and activities enhancing the visitor’s learning and social experience.

In addition to family groups, the Experiencenter serves numerous students from public and private schools as well as home school associations. Docent-led tours invite the students to actively participate in discussions and activities relating to the Experiencenter exhibition. Teachers are given extensive resource packets that include background information on specific works in the exhibition, curriculum ideas, classroom activities, and supplemental resources.

WHERE TO FIND US

The Dayton Art Institute sits on a hill overlooking the Miami River at the intersection of Forest and Riverview Avenues. Visitor parking is on the south side of the building just off Belmonte Park North, across from the Masonic Temple.

Museum hours are every day of the week, 10:00 a.m. to 4:00 p.m., Thursdays until 8:00 p.m. The Dayton Art Institute is free, thanks to a generous endowment from Bank One. (Note: Certain special exhibitions and workshops may have separate admission fees.)

ACKNOWLEDGEMENTS

This exhibition is sponsored by Dianne Komminsk and Rex Stores Corporation with additional support from The Frank M. Tait Foundation, Levin Porter Associates, The Berry Family, and the Levin Family Foundation.
A NOTE TO EDUCATORS

Recognizing the importance of architecture as art that surrounds us each day, The Dayton Art Institute developed the exhibition, EYES ON ARCHITECTURE. The goal of this Educator Resource Packet is to provide you, the educator, with supplemental information and resources to enhance your students' understanding of architecture and to complement their exploration of the exhibition.

The packet addresses each of the major sub-themes of the exhibition:

- Buildings as sacred spaces
- Buildings as public spaces
- Buildings as living spaces

Each section is further sub-divided as a way to provide the educator with extensive information and activities about specific objects found in the exhibition.

provides background information about the object and its relationship to a specific architectural structure or style while making reference to three qualities of architecture: function, structure, and aesthetics.

initiates questions about the object that are based on the inquiry approach to teaching art appreciation. Questions are open-ended and relate to specific mental tasks. They require critical and creative responses. Answers by students may differ but as such are reflective of the individual's insights and point-of-view. Educators should adapt questions as necessary to meet the needs of varying age groups.

suggests a variety of hands-on activities inviting creative expression.

The last section of the packet also looks at the art elements that architects use in the design of buildings. To further assist your planning, supplementary resources and web sites are also included.
Why Architecture?

Human beings have not always been builders. When they depended on hunting for survival, nomadic peoples were content to live in caves or makeshift shelters in the forest. With the development of agriculture, human beings indulged in the comfort of settled habitats. The basic principles of construction had to be learned by trial and error. Tools had to be invented and materials selected. In time, humankind discovered that it had a natural aptitude for building, not unlike the instinct that prompts a small child to place one toy block on top of another.

Expanded knowledge gave rise to more creative architectural techniques. It was no longer enough to simply build a shelter to live in. Now people needed tombs to be buried in, palaces from which to govern and temples where they could gather to worship their gods. These structures were meant to last beyond the life span of their builders, and in time, mud and brick gave way to steel and glass.

In the meantime, the builder had become an architect and the architect had become an artist. True architectural beauty was something far different from the decorative details added to a building’s façade. It existed in the inherent qualities of the building. The lines and proportions of the building had to reveal, to the responsive eye, the relationship between the individual parts and the whole.

If architecture is an art, is it also by definition functional? Unlike the beautiful painting that can exist as art for art’s sake, the great building must be suited to the purpose for which it was designed. If it is not, and the architect allows aesthetic considerations to outweigh the practical ones, the building fails to succeed.

It is this quality of functionality that is probably most responsible for making architecture the least understood of the arts. Because we need it to live, architecture surrounds us all the time. We see so much of it that we tend not to see it at all. We need to learn to look with new eyes at the buildings we walk through everyday. Learning to look with new eyes comes with practice and with a better understanding of what we are looking at. Whether we are looking at a temple from ancient Rome or the house next door, we can learn to appreciate the beauty, the structure and the purpose of each of these buildings. With appreciation, comes a respect for our heritage.

The Dayton Art Institute invites you as educators to explore **EYES ON ARCHITECTURE** with your students and learn to look at the buildings that surround you with new eyes.
BUILDINGS AS SACRED SPACES

From ancient times people have built places to honor and worship their gods. Whether a tomb to house their pharoah-god, a temple to honor a Greek goddess or a contemporary church with soaring glass walls, each space was designed as a sacred and holy place and its structure and appearance reflects that sacredness. We examine two sacred spaces in this section: a Thai Spirit House and the Roman Pantheon.

EXAMINE: Thai Spirit Houses

Spirit Houses: As Sacred Spaces

Spirit houses are a common sight in Thailand, located in Southeast Asia. They look like miniature houses or Buddhist temples standing on pedestals and serve as homes for the spirits of the land. Their origin is connected with the practice of animism, a traditional belief system with a strong emphasis on the spirit world. Animism existed in Southeast Asia long before the worship of Buddha. Many practices connected with animism have remained popular and co-exist with Buddhism today. The most common is the spirit house. Two examples of spirit houses will be displayed at different intervals during this exhibition.

Spirit Houses: As Functional Spaces

The Thai people believe that these “guardians of the land” inhabit the earth. They call these spirits Phra Phum (a sanskrit word pronounced praa ploom). These spirits command the good or bad fortune of people depending on their pleasure. When a spirit is disturbed by people who settle down where he resides, he will cause the people illness and misfortune. To appease the spirit and assure harmony and peace within a property site, the people pay respect to the Phra Phum by building a spirit house in a clean area away from the shadow of the main house. It is believed that if the shadow of the main house crosses the shadow of the spirit house, the spirit will take up residence with the owner. If such disturbances are avoided and the Phra Phum is properly cared for, he will provide protection and prosperity for the property owner.

Once purchased, the spirit house needs to be placed. A Brahman priest attached to the Royal Court is invited to erect the spirit house during a special ceremony. (Although Brahmanism is the smallest minority faith in Thailand, Brahman priests play a major role in many religious ceremonies throughout Thailand including the placing of spirit houses.) Choosing the spot where the spirit house will be placed, on what day, and at what time is of vital importance. Incantations are recited, accompanied by the blowing of a conch shell. At the conclusion of the ceremony, money is blessed and thrown over the house to honor the spirit. It is then the responsibility of the property owner to care for the Phra Phum on a daily basis with offerings of candles, burning incense, fruit, flowers and food which are placed on the outer platform that surrounds the spirit house.
When a spirit house becomes old and needs to be replaced, another ceremony is held to invite the spirit to move from the old house into a new one. The old spirit house is removed from the site and taken to the temple to a “resting place” under the large sacred Bodhi tree on the temple grounds. There it remains with other broken and discarded spirit houses.

**Spirit Houses: As Architectural Structures**

Although some spirit houses are designed by architects, most are constructed by Thai artisans and then purchased by the property owner. Formally, the spirit house was made of teakwood and resembled a Thai house. Today the style and materials used for the spirit house can vary from simple tin or wooden structures found in rural areas, to elaborate palatial houses with carved spires and towering roof lines. Many resemble Thai Buddhist temples. Many are also made from cement to prevent decay.

If a new building is being constructed, a new spirit house must also be constructed. The spirit house must be nicer than the building and be installed in a prominent place so that the Phra Phum will be happy. Architects in modern cities are now designing spirit houses from glass and steel to complement the modern buildings.

**Spirit Houses: As Art**

For the most part, spirit houses are classified as architectural folk art because they are usually designed by local Thai artisans and craftspeople. Little is known about the spirit house in The Dayton Art Institute’s collection. *Altar Model (Spiritual Set)* is a 20th century piece and includes a bronze figure representing the Phra Phum. Sometimes this figure is depicted holding a double-edged sword in his right hand (symbolizing the conquering of demons) and a book in his left hand (to record the deeds, births, and deaths of the land’s occupants). Two porcelain bowls are placed on the outer platform to hold offerings of food and drink. Based on its style, this piece could have been placed on property in a rural or urban area.

- A spirit house is a shrine-like miniature house set on a pillar. Does this miniature house look like the house you live in? What is the same about the spirit house and the place where you live? What is different?

- Many spirit houses look like traditional houses or temples found in Thailand. Today some architects design spirit houses to look like modern buildings made of glass and steel. Into which group would you place this spirit house? Is it traditional or modern?

- The building of spirit houses in Thailand is linked to ancient religious beliefs about spirits. What practices in our culture are linked to religious beliefs?
The spirit house provides the “guardian spirit of the land” with a home of its own and assures peace and good fortune for the property owner and his or her land. Why do you think the spirit is given a home of its own?

Spirit houses are considered sacred and holy by the people of Thailand. What buildings and objects might we consider sacred and holy in our culture?

Imagine that you are the spirit who lives in one of these spirit houses. Are you happy? Are you comfortable? Do you have everything you need in your house? Explain.

The people of Thailand consider spirit houses to be sacred architecture. What do you think?

EXPRESS: Thai Spirit Houses

K-4
Make a drawing or painting of a spirit house. Include the foods and gifts that you will offer to make the spirit comfortable. You may also want to include the spirit in the house.

5-8
Divide the class into groups of three or four or allow students to work individually. Design and construct contemporary spirit houses using found materials. Include the platform surrounding the spirit house and attach various objects to represent the offerings to the spirit. Mount the spirit houses on wooden poles or cardboard tubing. Display the spirit houses as a group installation.

9-12
Make available to students resources that contain visuals of contemporary buildings, public and private. Students are to select one building and design a spirit house to complement the design of that building. One element in their design should link it to the contemporary building (e.g. color or shape or materials). Construct the spirit house from foam core or some other suitable materials that can be easily cut, joined, and painted.
The Roman Pantheon: As a Sacred Space

The Pantheon (AD c. 118-28) is a giant domed temple that was probably dedicated to the seven planetary deities in the Roman pantheon of gods. "Pantheon" means "all the gods." We know little about the form of worship that took place in the Pantheon, but we do know that worship for the ancient Romans was a civic duty, not a private meditation. Apart from the standard observances it is unlikely that the ordinary worshiper would have had much involvement in ritualistic practices.

By the time Piranesi made this etching, the Pantheon had suffered various changes and adaptations. In 609, the Pantheon became the first pagan temple to be rededicated as a Catholic Church, and the remains of Christian martyrs were brought from the catacombs and reburied beneath the floor. It was renamed the Church of Santa Maria and Martyres, hence the title on Piranesi’s etching. In the early 17th century, twin bell towers were added but removed again in 1883. Although considered a “marvel” it was often plundered and for many years was used as a fort.

Today, the Pantheon is recognized as ancient Rome’s greatest architectural achievement, the high point of design and structural engineering.

The Roman Pantheon: As a Functional Space

Possibly designed by the Emperor Hadrian himself, the Pantheon covers an earlier temple erected by general Marcus Agrippa in 27 BC. Perhaps with a sense of loyalty to history, Hadrian had Agrippa’s name inscribed above the eight columns of the entrance portico instead of his own. His monumental porch originally faced a rectangular colonnaded courtyard. Today, only a small piazza remains in front. One enters through two huge, bronze-covered doors into a great circular room covered with a half-sphere dome. The sunken panels, or coffers, in the ceiling provide a decorative geometric pattern but also function to reduce the dead weight of the dome as it bears down on the surrounding walls. The circular wall contains a series of arches allowing for a number of recesses and niches. The only natural light enters through the unglazed oculus ("open eye") located at the top center of the dome. As the sun moves across the 29-foot span of the oculus, the light illuminates the floors and walls with striking patterns. The lack of interior support columns and arches creates a unified and pure open space suitable as a place for sacred worship.
The Roman Pantheon: As an Architectural Structure

Although the ancient Romans borrowed heavily from the Greek's architectural style, their engineering skills far surpassed those of the Greeks. The dramatic scale of the Pantheon was possible because of the Roman expertise in the use of concrete allowing them to build a half-sphere dome with a 144-foot diameter that is precisely equal to the vertical distance from the floor to the center of the dome. The dome was to remain the largest dome ever built until Brunelleschi raised his dome over the Florence Cathedral in the 15th century. The Pantheon's dome is constructed of stepped rings of concrete with less and less density reducing its thickness to about four feet at the edge of the oculus. Five rows of twenty-eight coffers (recessed square panels in the ceiling) on the interior of the dome diminish in size as they reach the oculus, reducing the outward thrust of the dome's weight.

The dome rests on a cylinder of masonry walls 20 feet thick. Hidden voids and recesses hollow out the wall so that it acts much like three continuous arcades which correspond to the three tiers of relieving arches visible on the outside of the Pantheon. Originally, these exterior walls were covered in colored marble.

Piranesi's View of the Pantheon: As Art

Giovanni Battista Piranesi was the son of a Venetian stone mason and the nephew of an architect. As a young man in Rome in 1740, he aspired to become a great architect, but was forced to turn to printmaking in order to sustain himself financially. He had an extremely successful career, creating and publishing his own etchings, but he always wanted to be known first and foremost as an architect. Unfortunately, none of his architectural plans for buildings were ever executed. However, his love for architecture is evident in his etchings, many of which focus on the classical buildings of Rome.

In the late 1740s, Piranesi began work on a series of etchings depicting views of Rome that were popular with tourists. The series, titled Vendute di Roma, (Views of Rome), consists of 135 prints and includes this image of the Pantheon, View of the Pantheon of Agrippa, Today the Church of S. Maria and Martyres. What made this series so appealing was Piranesi's unique vision and his technical expertise. He was able to capture the monumentality of the Pantheon (notice the tiny figures on the top of the dome) and provide a perspective of the building that in reality is not possible. He combines a frontal view and a side view of the ancient temple into one image. He also allows the viewer to see more of the dome than is possible if the spectator is standing as close to the Pantheon as this print implies.

Other vedutisti (view makers) were making similar prints at the time, but none were able to capture the essence of the buildings or portray the quality of sunlight on the façades with the same expertise as Piranesi. He usually began by making many drawings of a particular building on location. He then transferred a selected drawing from his notebooks onto a metal (usually copper) plate at his workshop. Using the intaglio (from the Italian meaning "cut into") process, he covered the plate
with a varnish, through which he drew with a sharp needle-like tool, exposing the bare copper beneath. After the drawing was complete, Piranesi submerged the plate in an acid bath which ate away at the exposed areas of copper, creating minute grooves to hold the printing ink. The length of time the plate was exposed to acid determined the depth of the lines and the resulting subtleties and contrasts. The plate was then inked and passed through a press. The force of the press transferred the ink from the plate to the paper. The final result looked much like a pen and ink drawing but was a mirror image of the original made on the copper plate.

Look carefully at Piranesi’s etching of the Pantheon from 1761 and Bellotto’s painting of the Pantheon (also in the exhibition). What is the same about each view of the temple? What is different?

Originally the Pantheon was a temple dedicated to Roman gods. In 609 it was dedicated as a Catholic Church. What was added to the building to make it look more like a church?

Piranesi placed figures on the dome of the Pantheon. What do you think he was trying to tell us about the building?

At first glance, this image of the Pantheon appears “realistic”, a term that refers to art that shows the appearance of things in a true-to-life manner. However, Piranesi combines a frontal view and a side view of the temple that is impossible to see in real life if you remain standing in the same spot. Would you still classify his print as “realistic”? Explain your answer.

What buildings in your community use elements taken from the Pantheon? Think about domes and columns, rotundas and large doors. What function do these buildings serve?

In the 1740s, Rome was a popular tourist spot for wealthy Europeans. The camera had not been invented yet, so taking a souvenir photo of the Pantheon was impossible. If you were a tourist in the 1740s would you have purchased Piranesi’s etching of the Pantheon? Why?

The Pantheon has been standing for nearly 2000 years. Piranesi’s etching is 250 years old. Why is it important to preserve both of these works of art?
EXPRESS: View of the Pantheon of Agrippa, Today the Church of S. Maria and Martyres
by Giovanni Battista Piranesi

K-4
Ask students to bring in a shoebox from home. This will become a Shoebox Diary. After a discussion about the architectural elements found on the Roman Pantheon (pediment, columns, dome, etc.), take the children on a walk through the neighborhood. Look for similar architectural elements on the buildings. Instruct the students to make drawings of the elements and include the name of the element and the place where it was found. They should keep the drawings in their Shoebox Diary. They might also look for elements on buildings in their own neighborhood that they could add to their collection. After they have acquired a number of drawings they can cut them out and use them to turn their shoebox into a building or they can make them a part of a drawing of their own design.

5-8
Discuss the primary shapes and forms used to build the Roman Pantheon (cylinder, hemisphere, triangle). Use cardboard tubes, paper bowls, and folded cardboard to recreate those shapes and forms. Build a three-dimensional structure by combining a variety of these forms. Can your building stand on its own?

9-12
Piranesi’s print is an etching printed with black ink. His style and technique was contemporary for the 1740s, but this is the 21st century. Instruct students to imagine that as contemporary artists they have been commissioned to make an updated image of the Pantheon that will attract young sightseers and tourists. They are to use contemporary materials and colors. Begin by making a sketch of the idea and then execute it in the medium of their choice.
BUILDINGS AS PUBLIC SPACES

We are surrounded by public buildings in every city and town. At first glance, the design of most public buildings reveals its function, be it a school or a bank or an office building. With a closer look, that same design can reveal much more. This section will concentrate on the architectural design of The Dayton Art Institute, not only as a public space for housing an art collection but as a premiere example of Renaissance style architecture.

EXAMINE: The Dayton Art Institute

The Dayton Art Institute: As a Public Space
A devoted patron of the arts, Mrs. Julia Shaw Carnell was the major force behind the decision to build a permanent home for the expanding collection of the Dayton Museum of Arts, originally housed in a two story residence at the corner of Monument and St. Clair Streets in Dayton. The cornerstone for the new museum was laid in 1928, and Mrs. Carnell’s gift to the people of Dayton opened in 1930.

The Dayton Art Institute: As a Functional Space
As a young girl of 18, Julia Shaw had toured Europe with her family and was impressed with the Italian Renaissance style and its complementary gardens and cloisters. She convinced Edward B. Green and Sons of Buffalo, N.Y., the architectural firm employed to design the Art Institute’s new building, that this style would best meet the needs of the new museum. She was interested in creating a relaxed atmosphere in which the people of Dayton could view and interact with great art. She wanted the museum to be known as Dayton’s “living room,” a comfortable and inviting space.

The Dayton Art Institute: As an Architectural Structure
The original plan for the Art Institute was based on a five-sided Italian villa designed and built in the 16th century by the Renaissance architect, Giacomo Barozzi da Vignola. This Italian villa had been seen several years before by the son of Edward Green. When he first saw the site chosen for the Art Institute with its steep approach and irregular lot lines, the younger Mr. Green, an architect himself, was reminded of the five-sided Villa Farnese located in Caprarola, Italy, which also had a steep approach.
The materials and support systems that make up the structure of The Dayton Art Institute are consistent with many of the same materials and supports found in Renaissance architecture. However, the architectural design also reflects a consideration for the midwestern climate and materials that are readily available to the builder. For example, the façade of the museum displays typical Italian Renaissance arches and symmetrical appointments reminiscent of the details found on the casino (garden house) that is located above the Villa Farnese in Italy. Yet the yellow-veined sandstone on the façade is from Glenmont, Ohio.

The two-storied exterior of the museum follows around the sides, the first story having rusticated stone masonry (stones having sunken or indented joints) and the second having smooth or “dressed” stone masonry, another Renaissance feature. The sweeping double staircase that leads to the original museum entrance is also modeled on the staircase leading to the Villa Farnese. It repeats the rusticated masonry treatment of the first story of the museum and has arched niches, rectangular openings, a fountain (currently non-functional), and sculptural human and animal heads integrated into its design. The balusters repeat the rhythm of those that adorn the balustrade of the loggia (upper balcony).
The Dayton Art Institute: As Art

The hilltop site of the Art Institute parallels the sites of several 15th-16th century Italian villas, but the inspiration for the design comes from the Villa Farnese and its Casino (garden house) which still stands today in Caprarola, a small town north of Rome.

The villa was originally commissioned by Cardinal Allessandro Farnese, who employed Italian architect Giacomo Barozzi da Vignola (1507-1573) to design and build the palace (1547-1559). Built in a pentagonal shape, the palace has an internal circular courtyard. Located on a hill above the palace is the casino with its three distinctive arches.

The Art Institute features elements derived from both the palace and the casino:

- three rounded arches that define the loggia, the area above the original main entrance to the building that opens off the Great Hall to the outside
- a decorated loggia wall that follows the tradition of the frescoes on the loggia of the Farnese casino
- symmetrically placed architectural elements such as windows and doors
- the alternating play of arch with horizontal window and door treatments

Mrs. Carnell traveled to Europe several times to purchase columns, capitals, ironwork, arches, and doors for use in various parts of the museum, particularly the Italian Cloister.

EXPLORE: The Dayton Art Institute

- Many architectural elements on the façade (the front or face of the building) of The Dayton Art Institute are derived from the façades of the palace and the casino of the Villa Farnese in Italy. Compare photographs of the museum and the villa. What elements are alike? What elements are different?

- Mr. Edward Green, the architect of the museum, used lines, shapes and textures when designing the building just as an artist uses these elements when creating a painting or sculpture. Describe the lines, shapes and textures you see.

- Gothic architecture from the Middle Ages is characterized by tall thin walls, pointed arches, large windows for light, and decorative ornaments added to the buildings. The Renaissance style of architecture historically followed the Gothic style but looks very different with its small windows, round arches, and ordered symmetry (if you cut the building in half from top to bottom, the two sides are a mirror image). Based on these two styles, how would you classify The Dayton Art Institute? Is it Gothic in style or Renaissance?

- An architect must consider the function of a building when creating the design. The function or purpose of an art museum is to display and preserve works of art so the architect designed the Art Institute with many large rooms to act as galleries. Think about buildings you are familiar with. How does the design of the building serve its function?
K-4
Take students on a walk around the school and let them make texture rubbings of the school façade. How many different textures can they find? Do the textures provide clues about the materials used in building the school? Discuss textures found on other kinds of buildings.

5-8
Go on a walking tour of the neighborhood around the school. Instruct students to sketch the variety of decorative shapes and motifs incorporated into the façades of the various buildings. Incorporate some of these motifs in a drawing for a new building. Do the motifs complement the style and function of the new structure?

9-12
Take students into the community to sketch one building they like and one they dislike. Tell students to consider changes they would make as architects to these buildings, then redraw the building of their choice, adding the new changes to the structure.
BUILDINGS AS LIVING SPACES

Perhaps the structure we are most familiar with is the building we live in. But are we aware that not everyone lives in a home like ours? Architects must consider geographical location, climate, and culture when designing living spaces. Those same considerations can influence artists using living spaces as the basis for their work. A look at art objects depicting very different living spaces, an ancient Nayarit house model from pre-Columbian times and two contemporary pieces by an artist who uses living spaces to inspire humor, will provide insight into the things that influence the design of a living space, be it real or imaginary.

Nayarit Village House: As a Living Space

During what is now called the Classic Period (250-900AD) of pre-Columbian history, the people who inhabited the west Mexican state of Nayarit buried their dead in vertical shaft tombs. Included in the tombs were a variety of ceramic vessels, figures, and house models. Because no remnants of actual houses have been found at the archaeological sites of ancient Nayarit, we must rely on these house models to provide clues as to the actual living spaces of the people. The house models generally reflect two types of dwellings: one-story, single chambered structures (probably single family dwellings) and two-storied complex buildings with several rooms (possibly representing the dwellings for village chiefs and their families). The models usually contain a number of figures in varying poses suggesting the simple activities of daily life.

Nayarit Village House: As a Functional Space

This house model in the museum’s collection depicts a house with two-stories and outside stairs. The figures represent the family members who probably lived in the house.

Nayarit Village House: As an Architectural Structure

Actual houses in Nayarit villages were probably made of sun-dried bricks and wood with thatched roofs. The high peaked roof design could easily shed water in the rainy season, yet provide protection from the heat. Such a structure is consistent with a climate that varies from warm with periodic rains to very hot.
Nayarit Village House: As Art

Generally, house models are made of coarse-grained clay and are painted in white, red, and buff with geometric line patterns painted on the roofs. They are crudely made, with little concern for detail especially in the figures. The groupings express the daily chores and amusements of the house’s inhabitants. Art historians and archaeologists are not sure why these models were buried with the dead in shaft tombs. It may have been a practice related to a belief in the after-life. They are unique in that no other records exist to shed light on the architecture and daily lives of the Nayarit peoples.

EXPLORE: House with Occupants

• Does this model of a house from ancient Mexico look like a house you have seen before? Where did you see it? In your neighborhood? On TV? On vacation?

• Although this model is made from clay, the house it represents was made from other materials that work well in the warm and sometimes rainy climate of western Mexico. Describe the materials you think the Nayarit people used to build their houses.

• If the Nayarit people had lived in a very cold climate, what materials would they have used to build their houses?

• Many house models such as this one were found buried with the dead in their tombs. Why do you think the people wanted a model of their house buried with them? What other objects do you think they buried with the dead?

• One of the functions of a house is to provide shelter for the people living inside. How many people do you think could live in a house like this? Where would they sleep? Where would they eat?

• The stairs of this two-story house are located on the outside. Why would the builder put the stairs on the outside?

• Imagine that you are living in a Nayarit village in Mexico 1500 years ago. Describe your daily chores and activities. Do you spend most of your time inside the house or outdoors? Why?

• If you could design your own house to live in, what would it look like?
EXAMINE: House with Occupants

K-4
Let children build their own house models using air dry clay. They could base it on the Nayarit house or on a house of their own design.

5-8
Remind students that Nayarit house models were found in tombs and are the only record we have of Nayarit architecture. Tell students to imagine they are archaeologists living in the year 4000 and have unearthed some house models from the 21st century. Instruct them to design a house from clay, representative of a 21st century living space. The house should be designed in such a way that it provides clues to the archaeologists about the architecture of the time.

9-12
Instruct students to build from clay an abstraction of a two-story Nayarit house model. They should use design elements derived from the Nayarit models such as the high pitched roof, the outside staircase, the large doors, and the figurines and recombine them to make an abstract sculpture. After a bisque firing, paint linear patterns on the sculpture with glaze and fire again.
Condominiums and Houseboats: As Living Spaces
The term condominium is relatively recent in architectural history. It refers to a multiple-unit complex where the units are each individually owned. Condominiums (condos) are common in areas where space for building individual homes is minimal and residents prefer ownership of their living space rather than rental. On the other hand, boats have been used as living spaces for centuries. Any boat that has spent more than a few days at sea has been equipped with eating and sleeping quarters for its crew and passengers. It is only recently that some boats have been designed strictly as living spaces.

Condominiums and Houseboats: As Functional Spaces
These two ceramic sculptures were inspired by two very different, yet functional living spaces in real life. The modern condo can house numerous families depending on the number of units in the complex. The architect designs a condo to function much as an individual home but must consider other factors such as the close proximity of neighbors and easy access to the unit. The designer of houseboats must consider the ordinary functions of a house but then remember that this boat will sit in water, not on land. That poses a new set of problems for the designer.

Condominiums and Houseboats: As Architectural Structures
Condominiums can be several stories high or they can be sprawling complexes depending on the number of units and the amount of space for building. Regardless of their size, architects must design a structure with a strong support system that can respond to the local climatic changes as well as the normal constraints placed on a building by its occupants. Although built in a very different fashion from regular buildings, the support structure for houseboats must be able to withstand the constant exposure to wind and water.
Condominium and House 4 Sail: As Art

Drawing on his earlier career as an architect, artist Don Williams creates glazed ceramic sculptures based on architectural concepts. He adds a humorous component to many of his pieces by visually representing a play on words. For example, House 4 Sail, is a play on the common realtor’s phrase “house for sale.” On the boat with a sail is a small house. On the sail is the number 4. Is it just a play on words or is it a creative response to a common living space?

In his sculpture, Condominium, Williams plays with the concept of a condo as a multi-unit complex by literally stacking seven two-story houses on top of each other. Their skewed placement adds to the humor.

EXPLORE: Condominium and House 4 Sail
by Donald Williams

• Do you know anyone who lives in a condominium or on a houseboat? What is different about the Condominium and House 4 Sail that you see here? What is the same?

• A condominium is classified as a multi-unit complex which means many families can live in one building. What other structures would be classified as multi-unit complexes? (Consider ancient dwellings and structures that insects and birds might live in.)

• The artist of these sculptures is also an architect. What influence do you think this has on his work?

• Mr. Williams has made several sculptures that include a two-story house like you see in these two pieces. Why do you think he likes to use this shape for the house?
The sculpture titled Condominium is a stack of seven houses. What does this imply about the purpose of a condo?

The title of the other sculpture is House 4 Sail. Mr. Williams is making a “play-on-words” based on a common phrase “House for Sale.” Explain the connection between the two phrases and the subject matter of the sculpture.

EXPRESS: Condominium and House 4 Sail
by Donald Williams

K-4
Collect a variety of boxes of different sizes, one for each student. For each box, cut a piece of paper the same size as the face of the box. Let children draw, color and decorate the façade of their condo unit on the paper. Glue the “façade” to the box. Divide the class into small groups of 6 to 8. Instruct each group to join their boxes together to build a group condominium. Or join all the boxes into one large class condominium.

5-8
Gather found materials and instruct students to design a house that will float. Materials might include plastic milk and soda bottles, straws, small boxes, fabric and yarn scraps, colored papers and foamcore.

9-12
The artist, Don Williams, has produced many ceramic sculptures using the house as the central theme. Here are some of the titles of his pieces: House Bound, A House Divided, Fish House, and Bird House. Instruct students to choose one of the titles and produce their own sculpture, keeping in mind the artist’s tendency to play with words. Use clay or foamcore or some other suitable material to build the structures.
THE ART IN ARCHITECTURE

A portion of the exhibition focuses on eight architectural design elements. How the architect chooses to use these elements will determine whether or not the structure is beautiful or ugly. In the exhibition, a different well-known and aesthetically pleasing structure is used to illustrate each of the elements. The structure used is listed in parentheses after each definition.

The Elements of Architectural Design

1. **Patterns**: Architects set up patterns of repeating motifs like walls and windows, solid spaces and open voids to create a sense of movement carrying your eye across the surface of the building. (Djenne Mud Mosque, Mali)

2. **Site**: The location chosen for a building will influence its design and the materials used. The architect will use the element of site to blend the building in with its surroundings or to create a contrast making the structure stand apart from its surroundings. (Fallingwater at Bear Run, Pennsylvania)

3. **Space**: Space can be seen as positive or negative. It can be the area taken up by an object (positive space) or the area surrounding an object (negative space). Both are equally important to the architect. (Contemporary Arts Center in Cincinnati, Ohio)

4. **Weight and Mass**: A building can look chunky and heavy or light and airy depending on the architect’s choice of materials and use of other design elements like shape and color. (Step Pyramid of Zoser at Sakkara, Egypt)

5. **Shape and Form**: Is a building square, triangular, or round? Perhaps it’s a combination of shapes. The shape and form that a building takes varies according to cultural and individual ideas of beauty. A building’s shape can also provide information about its purpose and character. (Great Stupa at Sanchi, India)

6. **Proportion**: Proportion refers to a building’s size in relationship to the human body, as well as its surroundings. Architects can manipulate this element to make a building seem small and cozy or large and overwhelming. (Parthenon at Athens, Greece)
7. **Color and Texture:** Architects use materials with interesting colors and surface textures to differentiate various parts of a building or to invite a particular emotional response. A red brick building has a different feel and appearance from a smooth steel building with large glass windows. (The Benjamin and Marian Schuster Center for the Performing Arts in Dayton, Ohio)

8. **Line:** By using a variety of lines, architects can give buildings meaning and purpose. Vertical lines suggest strength and stability. Horizontal lines imply restfulness and security. Diagonal lines convey a sense of movement. (New World Trade Center Design in New York City)

**Suggestions for Use:**

- Select one of the buildings discussed in this packet and ask students to describe how the architect used each of the architectural elements to create a beautiful building. Does one element stand out more than the others?

- Compare the list of architectural elements to the principles of visual art. (Elements: line, color, shape, form, space, texture, and value. Principles: emphasis, unity, movement, repetition, contrast, and balance.) How are they related?

- Select a favorite architectural element and design a building that emphasizes that element.

- Find a building that you think is visually unappealing. What would you change to make the building more beautiful? Which elements of architecture did you use that the architect seemingly ignored?

- Take your classmates on a tour of your school. Point out specific examples of how the architect used each architectural element in the design of the building.

- Provide students with examples of famous buildings. Which elements of architecture are most obvious in each of the buildings? Name the specific elements that provide clues to the function and purpose of the building. Which elements did the architect use to make the building aesthetically pleasing (beautiful)?
SUGGESTED READING

For educators:


*available in the Educator Resource Center in the Mead Learning Center of The Dayton Art Institute
For children:


VIDEOS AND CD-ROMS

• * America’s Weirdest Homes. Superior Home Video, 1999, 60 minutes

• * Cathedral. PBS Home Video, 1985. 60 minutes.

• * Castle. PBS Home Video, 1983. 60 minutes.

• * Gaudi. Academic Entertainment Video, 25 minutes.

• * Gothic Cathedrals. A&E Home Videos, 1995. 50 minutes

• * Notre-Dame, Cathedral of Amiens (Part 11: Revelation Computer and Architectural Animation) Crystal Video, 12 minutes.

• * Pyramid. PBS Home Video, 1988. 60 minutes.

• * Roman City. PBS Home Video 1994. 60 minutes.


• * The World of Buckminster Fuller. Mystic Fire Video, 1971. 85 minutes

*available in the Educator Resource Center in the Mead Learning Center of The Dayton Art Institute
WEB SITES

These web sites offer lesson plans and additional information and resources connecting architecture to the visual arts as well as math and science.

www.pbs.org/wgbh/buildingbig
An excellent site for interactive architectural activities. Also includes a database of information on a variety of well-known buildings.

www.greatbuildings.com
Provides extensive reference material, 3-D models, and photographic images of buildings around the world.

www.norfolk-county.com/aerc
Contains interdisciplinary architecture-related projects.

www.mathforum.org
Relates math and architecture through a number of lesson plans for all grade levels.

www.archkidecture.org
A great interactive site for kids. Interesting for educators, too.

www.school.discovery.com
From the producers of the Discovery Channel, this site has a variety of lesson plans for all grade levels.

www.phlf.org
The Pittsburgh Historical Landmark Foundation has a great section just for teachers and kids.

www.kinderart.com
Has thousands of lesson plan ideas for young children, including some clever ideas for architecture based lessons.

www.artsedge.kennedy-center.org
An easy-to-navigate site with standards-based curriculum ideas for all levels.

www.eduweb.com
On-line learning activities that connect to all the disciplines.

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