



# The Architecture of the Solomon R. Guggenheim Museum

**A Guide for  
Teachers and  
Students**

## USING THIS GUIDE

From its very beginnings the Solomon R. Guggenheim Museum has been a hub for new art and new ideas. The museum was designed by renowned architect Frank Lloyd Wright to house an innovative collection of works in a unique environment. Today, the museum continues to be a landmark destination that attracts visitors from around the world.

This curriculum module is designed as a resource for educators to help introduce the unique architecture and history of the Solomon R. Guggenheim Museum to students. It can be used on its own in the classroom, as preparation for a visit to the museum, or afterward as a post-visit lesson. Although the primary goal of this guide is to introduce the museum's unique architecture, many of the suggested discussions and activities can be used to explore the history, design, and use of any chosen building.

The guide is arranged according to the following sequence:

**TEACHER INFORMATION** includes a history of the Solomon R. Guggenheim Museum and biographies of those figures critical to its founding.

**VIEW + DISCUSS** walks you through a guided tour of the museum's architecture with opportunities for careful looking and for discovering unique aspects of the building.

**FURTHER EXPLORATIONS** activities that respond to the architecture of the Solomon R. Guggenheim Museum and Frank Lloyd Wright's approach to architectural design through discussion, writing, and the visual arts.

**ADDITIONAL RESOURCES** Vocabulary and definitions for words and phrases that may be new to students, or used within a special context (i.e., avant-garde, non-objective art). A list of suggested books, videos, and Web sites that relate directly to this curriculum module. Selected color images for class-wide viewing and discussion.

Teachers are encouraged to adapt the lessons and activities in this curriculum module to meet the needs of their students.



**TEACHER INFORMATION**

*I need a fighter, a lover of space, an agitator, a tester and a wise man. . . . I want a temple of spirit, a monument!*

–Hilla Rebay,  
to Frank Lloyd Wright,  
1943

## A Brief History of the Solomon R. Guggenheim Museum

In June 1943, renowned architect Frank Lloyd Wright received a letter from Hilla Rebay, the art advisor to Solomon R. Guggenheim, asking him to design a new building to house Guggenheim’s collection of non-objective art, a radical new art form being developed by such artists as Vasily Kandinsky, Paul Klee, and Piet Mondrian.

Guggenheim’s one requirement of the architect was that the building should be unlike any other museum in the world. Wright, in turn, created a design that he believed would be “the best possible atmosphere in which to show fine paintings or listen to music.” Frank Lloyd Wright was already known as the preeminent American architect of the 20th century, but this invitation would add another major accomplishment to his influential career.

The project evolved into a complex struggle pitting the architect against his clients, city officials, the art world, and public opinion. Both Guggenheim and Wright would die before the building’s 1959 completion, but their achievement, the Solomon R. Guggenheim Museum, remains. It testifies not only to Wright’s architectural genius, but also to the adventurous spirit that characterized its founders.

Wright made no secret of his disenchantment with Guggenheim’s choice of New York City for his museum: “I can think of several more desirable places in the world to build his great museum,” Wright wrote in 1949, “but we will have to try New York.” To Wright, the city was overbuilt, overpopulated, and lacked architectural merit.

Still, he proceeded with his client’s wishes, considering locations on 36th Street, 54th Street, and Park Avenue (all in Manhattan), as well as in the Riverdale section of the Bronx, before settling on the present site on Fifth Avenue between 88th and 89th Streets. Its proximity to Central Park was key; as close to nature as one gets in New York, the park afforded relief from the noise and congestion of the city.

Nature not only provided the museum with a respite from New York’s distractions but also lent it inspiration. The Guggenheim Museum is an embodiment of Wright’s attempts to incorporate organic form into architecture. On one of his early sketches, Wright jotted “inverted ziggurat,” referring to a stepped or winding pyramidal temple of Babylonian origin. His plan for the new building dispensed with the conventional approach to museum design, which led visitors through a series of interconnected rooms and forced them to retrace their steps when exiting. Instead, Wright whisked people to the top of the building via elevator, proceeding downward at a leisurely pace on the gentle slope of a continuous ramp. The galleries were divided like the membranes in citrus fruit, with self-contained yet interdependent sections. The open rotunda afforded viewers the unique possibility of seeing several bays of work on different levels simultaneously. The spiral design recalled a nautilus shell, with continuous spaces flowing freely one into another.

Wright’s design put his unique stamp on Modernist architecture’s rigid geometry. The building incorporates triangles, ovals, arcs, circles, and squares. Forms echo one another throughout: oval-shaped columns, for example, are reiterated in the geometry of the fountain and the stairwell of the Thannhauser Building. However, circularity is the major motif, from the rotunda to the inlaid design of the terrazzo floors.

Originally the small rotunda (or monitor building, as Wright called it) was intended to house apartments for Hilla Rebay and Solomon Guggenheim, but instead the space became offices and storage space. When between 1990 and 1992 the museum underwent a major restoration, it was converted entirely to exhibition space and renamed the Thannhauser Building in honor of one of the museum's most important bequests. This allowed for the display the museum's growing permanent collection and for visitors to enjoy portions of the building that had previously been off-limits. As part of the restoration a new wing, designed by Gwathmey Siegel and Associates, Architects, was added. This tower provides four additional exhibition galleries as well as two upper floors devoted to offices. The most recent addition to the museum, the Sackler Center for Arts Education, opened in 2001 and provides a permanent public facility devoted to arts education.

Some people, especially artists, criticized Wright for creating a museum environment that might overpower the art inside. "On the contrary," he wrote, "it was to make the building and the painting an uninterrupted, beautiful symphony such as never existed in the World of Art before." In conquering the static regularity of geometric design and combining it with the plasticity of nature, Wright produced a vibrant building whose architecture is as refreshing now as when it first opened. In August 1990, the Solomon R. Guggenheim Museum was designated as an official New York City landmark. It is the youngest building ever to receive such recognition. The Guggenheim is arguably Wright's most eloquent presentation and stands today as one of the great works of architecture produced in the 20th century.

*Based on an essay by Matthew Drutt, former Associate Curator for Research*

## Biographies

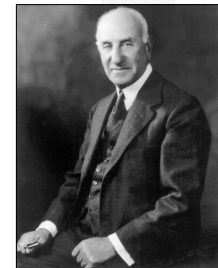
### Solomon Robert Guggenheim (1861–1949)

Solomon R. Guggenheim was one of ten children born to Meyer and Barbara (Meyers) Guggenheim. In 1847 the family emigrated from Switzerland to Philadelphia. Meyer worked his way up from a peddler to a merchant and manufacturer. In 1879 Meyer Guggenheim invested in a silver mine, and soon owned silver, lead, and copper mines.

Along with several of his brothers, Solomon was actively involved in the Guggenheim family mining businesses. Known as a courageous young man, he was very receptive to new ideas and new ways of doing things. In 1895, Solomon Guggenheim married Irene Rothschild; together, they had three daughters. Irene Rothschild Guggenheim was interested in art, and it was she who convinced her husband to collect, at first focusing on "old master" paintings.

In 1929 Irene commissioned a newly arrived German painter named Hilla Rebay to paint her husband Solomon's portrait. Solomon visited Rebay's studio in Carnegie Hall, where the walls were hung with non-objective paintings. While Rebay painted Guggenheim's portrait, she taught him about non-objective art. She later wrote, "Guggenheim, who had been collecting paintings by old masters for many years... saw a non-objective painting, a watercolor by Rudolf Bauer. 'By Jove, this is beautiful,' was his immediate reaction."

In the summer of 1929, Hilla Rebay and Mr. and Mrs. Guggenheim traveled to Europe, where they visited the studios of many artists who were painting non-objective art. During that trip, Guggenheim purchased his first piece of non-objective art: Vasily Kandinsky's *Composition 8* (1923). By 1930, Guggenheim owned art by Kandinsky, Laszlo Moholy-Nagy, Marc Chagall, Fernand Leger, Robert



Delaunay, Amedeo Modigliani, and Georges Seurat, among others, and had decided to start his own museum.

### **Hilla Rebay von Ehrenwiesen (1890–1967)**

Born in Germany, the painter Hilla Rebay was part of a community of European avant-garde artists. Her friends and colleagues included Jean Arp, Kurt Schwitters, and Max Ernst, all of whom would eventually be considered major artists. Rebay was especially interested in the paintings of artists Rudolph Bauer and Vasily Kandinsky who were working in a new style that she called Non-Objective Painting.

According to Rebay, “Non-Objective painting represents no object or subject known to us on earth. It is simply a beautiful organization of colors and forms to be enjoyed for beauty’s sake and arranged in rhythmic order.” Rebay was deeply concerned with the spiritual in art and was influenced by Buddhism and Theosophy. She considered the masterpieces of Non-Objective painting to be “the culmination of spiritual power made intuitively visible. The forms and colors we see are secondary to their spiritual rhythm which we feel.”

In 1928, soon after Rebay arrived in New York, Irene Guggenheim commissioned her to paint Solomon Guggenheim’s portrait. Hilla Rebay eventually became Solomon Guggenheim’s chief art adviser, and later the first director of the Museum of Non-Objective Painting and its successor, the Guggenheim Museum.

### **Frank Lloyd Wright (1867–1959)**

Wright was born and raised on the farmlands of Wisconsin. His mother had a vision for her son—that he would become a great architect. Wright was raised with strong guiding principles, a love of nature, a belief in the unity of all things and a respect for discipline and hard work. In 1887, following his study of civil engineering at the University of Wisconsin,

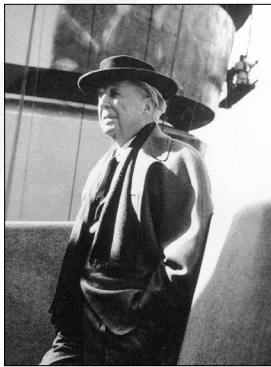
Wright went to Chicago, where he became a designer for the firm of Adler and Sullivan. One of the partners of this company, the American architect Louis Sullivan, had a profound influence on Wright’s work. Sullivan’s mantra, “form follows function,” would also be embraced by Wright. In 1893 Wright left the firm to establish his own office in Chicago.

Wright created the philosophy of “organic architecture,” which maintains that the building should develop out of its natural surroundings. From the outset he exhibited bold originality in his designs and rebelled against the ornate neoclassic and Victorian styles favored by many architects of the time. He believed that the architectural form must ultimately be determined in each case by the particular function of the building, its environment, and the type of materials employed in the structure. Among his fundamental contributions was the use of various building materials for their natural colors and textures, as well as for their structural characteristics.

Wright initiated many new techniques, such as the use of precast concrete blocks reinforced by steel rods. He also introduced numerous innovations, including air conditioning, indirect lighting, and panel heating.

Wright spent much time in writing, lecturing, and teaching and established Taliesin, a school and studio-workshop for apprentices who assisted him on his projects. He also founded the Taliesin Fellowship to support such efforts.

Early in his career, Wright had originated many of the principles that are today the fundamental concepts of modern architecture. Throughout his career, architects who were more conventional than Wright opposed his unorthodox methods, but there is no doubt that his work has profoundly influenced the development of contemporary architecture.





**VIEW + DISCUSS**

A NOTE TO TEACHERS: This essay can be read to students as a guided introduction to the museum's architecture. Suggestions for teacher/ student discussion of the images are printed in italics.

## Experiencing the Guggenheim Museum

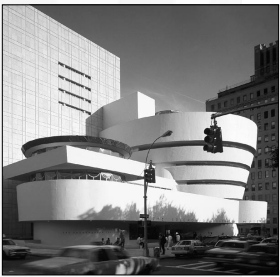
As you walk north on Fifth Avenue through the East 80s, you pass block after block of tall apartment houses that establish a formidable stately wall of relative uniformity. On the opposite side of the street, an extended stone wall marks the outer limit of Central Park and presents its own predictable rhythm. The elements of the streetscape impart the message "keep walking." And then you reach 88th Street. The street opens up, the profile becomes lower, air and light are more abundant. You have reached the Guggenheim Museum.

Frank Lloyd Wright was no fan of Manhattan. He once described it as a "vast prison with glass fronts." For Wright the saving grace for the museum's site was its proximity to Central Park. As close to nature as one gets in New York, the park afforded relief from the noise and congestion of the City.

**IMAGE 1** *Because of his love of natural settings, Frank Lloyd Wright would have preferred the Guggenheim Museum be built outside New York City. Do you agree or disagree? Why? As you observe this aerial photo of the museum, what natural elements can you see? Describe the museum in relationship to its site. In what ways is the museum in harmony with the area around it? How is it different from the environment that surrounds it?*



1



2

Whereas the rest of Fifth Avenue presents buildings that are rectangular, vertical, and decorated with bits of ornamentation, the Guggenheim counters this regularity with its circular, horizontal, and sculpted facade.

Wright put out a "welcome mat" for visitors by more than doubling the width of the sidewalk and announcing his central motif—the circle—even in the concrete pavers that surround the building. Year-round you will find people perched along the outside ledges, taking in the sun, enjoying a snack purchased from one of the street vendors, or watching the passing parade of natives and tourists from around the world.

**IMAGE 2** As you face the outside of the museum you will see three distinct formations. To your right, and most imposing, is the large rotunda. To the left, the small rotunda echoes the circular shape at a smaller scale. Until 1988 it was used as administrative offices, but is now open to the public. The rectangular building is an addition that opened in 1992. Designed by Gwathmey Siegel Associates, Architects, it provides additional exhibition and office space.

*Because of its unusual shape, the Guggenheim Museum has been compared to many common and not-so-common objects. What does the museum remind you of? Try to complete the following sentence:*

*The Guggenheim Museum is like a \_\_\_\_\_.*

As you approach the museum's entrance, the openness you previously felt is replaced by the imposition of a hovering, low ceiling. The entrance is simple and understated. At every step of the way Frank Lloyd Wright directs what you see and when you see it.



**IMAGE 3** As you step forward the low-ceilinged area suddenly opens into the rotunda and draws your eye upward to the overarching skylight. The works of art remain mostly hidden. Before you get to them, you must experience the building itself.

Here we begin to grasp Wright's vision for the museum space. Wright has based his design on the idea of a spiral-ramped building topped by a large skylight. He conceived of the museum as an airy, open place where visitors would not have to retrace their steps. He planned a continuous ramp curling around a great central space. The rotunda floor functions almost like a town plaza. Visitors on the ramps not only view the art, but also are aware of people in other areas of the museum. Wright described his plan as one in which the visitor would enter the building on the ground level, take an elevator to the top, and descend the gradually sloped ramp, enjoying the art on display, until returning to the entrance.

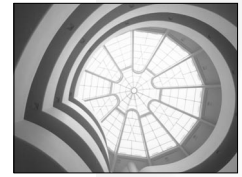
**IMAGE 4** This photo was taken from the top ramp of the museum looking down to the rotunda floor below. Some people find this experience thrilling; some find it frightening and can't quite bear to look down. Imagine yourself emerging from the rotunda elevator onto the museum's top ramp. Write a paragraph that describes what you see, what you feel and what you hear as you view the museum from this perspective. Compare your reactions with those of your classmates.

**IMAGE 5** This diagram shows the interior plan of the Guggenheim Museum. According to Wright's design, visitors would enter the building, take an elevator to the top, and enjoy a continuous art-viewing experience while descending along the spiral ramp. With a pointer, trace the path that Wright intended for visitors to travel. In what way does Wright's design conform to the principle of "form follows function"? Are there ways that Wright's design is contrary to the function of an art museum?

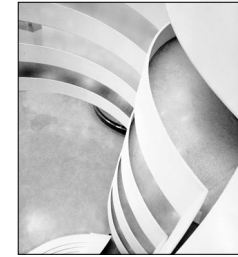
**IMAGE 6** This painting, *Composition 8* by Vasily Kandinsky, was the first non-objective painting purchased by Solomon Guggenheim. At the time, this painting was considered revolutionary because it used forms, shapes, and colors that were invented rather than observed. The Guggenheim Museum was built to house Solomon Guggenheim's collection of non-objective paintings. In what ways does the architecture of the museum seem to consider the paintings that it was designed to exhibit?

**According to architectural historian and critic Paul Goldberger:**

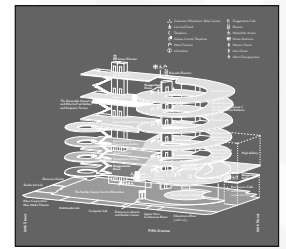
"In many buildings, you observe them best by staying in one place and taking it all in. But the only real way to experience the rotunda is to move along the spiral.... Because it's the experience of...feeling the space change, feeling yourself go round and round at this remarkable pace that Wright sets for you...seeing a piece of art that you have just seen close-up again across the rotunda from a distance. All those things are essential to the experience of the Guggenheim. It's a building that you cannot experience by sitting in one place.... It was Wright's idea that the building is about movement through space as much as it is about space itself."



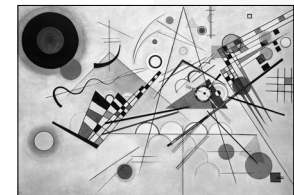
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5



6

## Questions You Can Ask a Building

From the first moment you encounter the Guggenheim Museum, you are aware that it is different from other buildings. By comparing your responses to the following list of questions you can better appreciate its uniqueness. These questions can be used to 'interview' any building and better assess the impact that architecture has on our aesthetics and environment.

### Observation from Outside

Where is this building located?

What is the first thing you notice about this building?

List five words you would use to describe it.

Does it remind you of any natural or manufactured form or object? What is it?

What materials is the building made from?

What colors, patterns, textures, and/or decoration do you see on this building?

Why do you think they were used?

How many floors does it have?

How is this building similar to or different from others along the street?

What is this building used for? How can you tell?

When do you think it was built? How can you tell?

How do you enter this building?

From looking at the outside of the building, describe what you expect to find on the inside.

Make a sketch of what you envision.

The Guggenheim Museum

Another Building

### Observation from Inside

List five words to describe your experience of the inside of this building.

How is it similar to or different from other buildings you have visited?

How is it similar to or different from what you expected?

What sounds do you hear?

What shapes do you see?

Where is the center of the building?

How do you get around the building?

What is your favorite spot within this building? Your least favorite?

How would you describe this building to a person who has never been here?

### Questions That Require Research

What is this building's history? What was on the site before it was built?

The Guggenheim Museum

Another Building

## Geometric Shapes

Most buildings contain interior spaces that are rectilinear. Frank Lloyd Wright thought in curves and straight lines—triangles, circles, ovals, squares, and spirals—as well as shapes adapted from nature. For Wright, geometry was the basic building block of nature. Geometric forms also held symbolic significance. He saw the circle as a symbol of infinity while the triangle suggested aspiration. Look down and you find circles in the terrazzo floor beneath your feet. Look up at the underside of the ramp and you see it punctuated by triangular lighting panels.

### Suggested Discussion Topic

Ask students to look around their classroom and perceive it as a series of shapes and forms, rather than as “a room.” How many different shapes and forms can they find? What shapes are the windows, doors, closets, and lighting fixtures? Make an inventory of the architectural shapes and spaces in your classroom.

### Architectural Shape Inventory

Look around your classroom and try to see its architecture as a series of interlocking shapes. Draw or list the various geometric shapes you see.

Architectural Element	Shape at School	Shape at the Guggenheim Museum
WALLS		
CEILING		
FLOOR		
WINDOWS		
DOORS		
BATHROOMS		
STAIRCASES		
ELEVATORS		
LIGHTING FIXTURES		
COLUMNS		
SEATING		
OTHER		

### Museum Activity

Bring this table with you to the museum. During your visit students should complete the last column of this table. Make an inventory of the geometric shapes and forms you encounter as you explore the museum. Be sure to bring pencils along so that students can draw the shapes they observe. Some of the shapes and forms will have common names, (circles, triangles, cylinders), while others either have less common names (trapezoids) or no names at all.

### Post-Visit Classroom Activity

Compare the list of shapes from your classroom with the ones from your visit to the museum. Which space had more geometric variety? Why are rectangles so prevalent in most architecture? Can you find a building in your neighborhood that breaks with convention? Describe how it differs from the norm.

### Form Follows Function

As a young architect Frank Lloyd Wright worked for Louis Sullivan (1856–1924) in his Chicago-based architectural firm. Sullivan is known for steel-frame construction that led to the emergence of the skyscraper. Sullivan’s famous axiom, “Form follows function,” became the touchstone for many architects. This meant that the purpose of a building should be the starting point for its design. This principle is thoroughly visible in the plan for the Guggenheim Museum. According to Wright’s design, visitors would enter the building, take an elevator to the top and enjoy a continuous art-viewing experience while descending along the spiral ramp.

Discuss the concept of form and function as they relate to your school. What is the function of a classroom? Of a school building? Does the school’s design suit its function? Are there ways in which the school’s structure fails to meet the daily needs of the students and educators who use it?

## Form Follows Function Worksheet

To examine this principle, observe some common objects. A pencil, comb, scissors, fork, or some similar object would be good choices for demonstration.

Name of Object: \_\_\_\_\_

1. Describe the purpose of this object (its function).

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2. Write directions for how the object should be used.

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3. Describe its design (or form) as completely as possible. Include a description of its shape, material(s), color, texture, weight, and any other details you can observe.

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4. Describe how the design of the object is connected to its use.

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5. Name one thing you could change in the design of the object that would make it less functional.

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6. Can you think of an improvement to make the object more functional?

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## Organic Architecture

Frank Lloyd Wright was interested in the relationship between buildings and their surrounding environments. He believed that a building should complement its environment so as to create a single, unified space that appears to “grow naturally” out of the ground. He also thought that a building should function like a cohesive organism, where each part of the design relates to the whole. Wright’s organic architecture often includes natural elements such as light, plants, and water into his designs.

Through years of study and experimentation, organic architecture came to describe Wright’s total design ideology. Some of the governing principles of this philosophy included:

- The belief that a building should appear to grow easily from its site;
- Choosing one dominant form for a building and integrating that form throughout;
- Using natural colors, “Go into the woods and field for color schemes”;
- Revealing the nature of materials;
- Opening up spaces;
- Providing a place for natural foliage.

The principles of organic architecture are apparent in another of Wright’s buildings, a private residence known as Fallingwater, in Bear Run, Pennsylvania. On the left is the site. As you examine the photo on the right with Fallingwater completed, describe how Wright has applied the principles of organic architecture to the design.



Photo courtesy of Western Pennsylvania Conservancy.



Photograph by Robert P. Ruschak courtesy of Western Pennsylvania Conservancy.

Ask students to imagine that they are architects who practice the principles of organic architecture. How would their designs change for a private home in the following environments?

- On a tropical beach
- In a city
- Near snowcapped mountains
- In forest or densely wooded area

Discuss how climate and terrain affect architectural design.



### Classroom Activity

A Wright building and its site are wedded. One cannot be considered without the other. Ask students to choose a photo of a site and design a building that is in harmony with its surrounding environment. When the drawings are completed, ask students to describe how the building they designed adheres to the principles of organic architecture.





**FURTHER EXPLORATIONS**

S O L O M O N R G U G G E N H E I M M U S E U

## Frank Lloyd Wright and Nature

Nature, above all else, was Wright's most inspirational force. He advised students to "study nature, love nature, stay close to nature. It will never fail you." He did not suggest copying nature, but instead, allowing it to be an inspiration.

Wright often brought aspects of nature into his buildings with his use of natural light, plants, and water. At the Guggenheim Museum, it is thought that a nautilus shell inspired the spiral ramp and that the radial symmetry of a spider web informed the design of the rotunda skylight. As you look around at your built environment, do you notice any designs that were inspired by nature? What are they? What natural forms, materials, or phenomena do they echo?

### Suggested Activity

Ask students to gather a collection of natural forms. Seashells, leaves, flowers, and seedpods are just a few possibilities. A wonderful resource for examining the incredible variety of plant forms is the work of Karl Blossfeldt (1865–1932), a sculptor and teacher in turn-of-the-century Berlin whose photographs are devoted to magnified plants. His images influenced many architects and decorative artists of his time, who quoted Blossfeldt's forms on scales as small as ornamental ironwork and as large as the shapes of entire buildings. Blossfeldt's photographs are available in affordable books and online and are listed in the Resources section of this guide.



Photographs by Karl Blossfeldt

Ask students to choose an object from their collection of natural forms and develop a drawing and/or model for a building based on that natural form. When the designs are completed, have them present their ideas to the class.

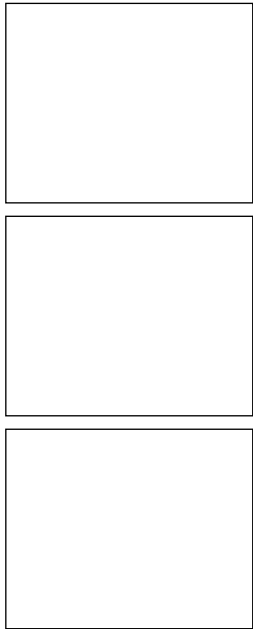
## Drawing on Nature

Student's name \_\_\_\_\_ Date \_\_\_\_\_

Natural form chosen \_\_\_\_\_

1. What are the major physical characteristics of this form? Include shape, color, pattern, and texture in your description.

2. Draw the form from three different viewpoints.



3. In the space below, make a drawing for a building that uses this natural form as inspiration for an architectural design.



How will this building be used?

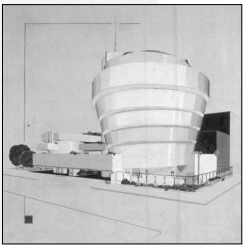
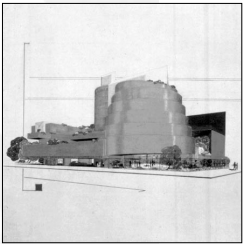
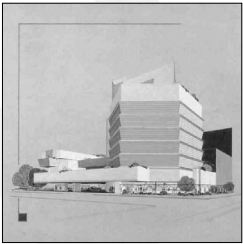
Where is its ideal site?

What materials should be used in its construction?

## Refining Ideas

The Guggenheim Museum was nearly 16 years in the making. Frank Lloyd Wright went through numerous ideas and revisions before a final design was approved. One early design was hexagonal, another was clad in pink marble. In what ways is today's museum (pictured top) similar to or different from earlier designs?

Both artists and architects frequently experiment with a variety of ideas before deciding upon a final design. In the space below invent a "Lost Sketch for the Design of the Solomon R. Guggenheim Museum." When you are done, describe the drawing as one of the steps toward the conception of the final museum design.



## Designing a New Museum

According to architectural critic Paul Goldberger, “Frank Lloyd Wright’s Guggenheim Museum in New York forever altered the way people conceived of the modern museum.... More than any other postwar building [it] provided the example of the art museum as a magnetic, highly sculptural presence.” (*Guggenheim Magazine*, Fall 1999 p. 45). Recent decades have seen a great increase both in the number of museums and the ways in which they are designed resulting in museums that are as important architecturally as for the art they contain.

1. Ask students to research on the internet some of the dramatic museum buildings that have opened to the public in recent decades. Some suggestions include:

**The Guggenheim Museum Bilbao (Spain)**  
**Frank Gehry, Architect**

**The J. Paul Getty Museum, Los Angeles, CA**  
**Richard Meier, Architect**

**The Centre Georges Pompidou, Paris (France)**  
**Renzo Piano & Richard Rogers, Architects**

The book *Toward a New Museum* by Victoria Newhouse provides a compendium of trends in museum architecture worldwide.

2. The Guggenheim Museum in New York City was designed to exhibit a new type of art (non-objective art) in an innovative way. Ask your students what type of museum collection they would like to visit. Some possibilities are:

**Snow Boarding, Wrestling, Chairs, Televisions and Radios, Rock and Roll, Science Fiction, Fast Food, Fashion, Computers, Pets.**

Students should feel free to choose their own theme for the collection.

List and describe some of the objects that would be part your exhibition.

- How would you want people to experience these objects?
- What would be the first object that visitors would encounter?
- What would the outside of the building look like? What would it be made from?
- How would you move through the gallery spaces?

Encourage students to create a few quick sketches for a museum design to house their unique collection. Have them discuss their drawings and get feedback on their ideas.

Next, have students create three-dimensional scale models of their revised design. Provide materials with interesting shapes and textures, including small pieces of wood, packing materials, cardboard, plastic cups, Mylar, acetate, paperclips, foil, glue, and tape.

When the drawings and models are complete, students should present their designs to the class.

## For Further Discussion

### “A Temple of Spirit”

Hilla Rebay’s 1943 letter to Frank Lloyd Wright asked him to design “a temple of spirit.” People have varying ideas about what makes a place spiritual. For some, it may be a natural environment, like a forest or a beach. For others, a church, synagogue, mosque, or other building is the site that supports a spiritual experience. Ask each student to brainstorm a list of words they would use to describe the perfect spiritual environment. Ask them to make a sketch, model, or narrative description of that place. Then, have students present their visions to the class.

### Reacting to Innovation

When the Guggenheim Museum first opened to the public in 1959 some people objected to it. People protested, wrote angry letters, and published satirical cartoons about its unique architecture. Here are some of the cartoons that have appeared in magazines and newspapers.

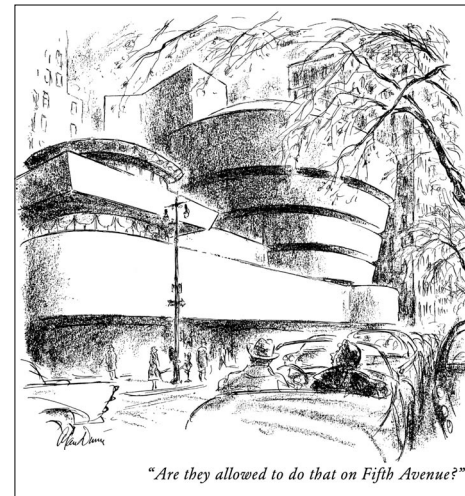
### “There Goes the Neighborhood”

What does the museum remind you of? Why do you think some people were initially so upset by its design? In her book *There Goes the Neighborhood*, author Susan Goldman Rubin cites many examples of buildings that were criticized when they were first built, but have eventually been embraced by the public. Do you know examples of art, literature, architecture, inventions, or ideas that initially prompted public criticism eventually won acceptance? What are they? Why do you think they were criticized?

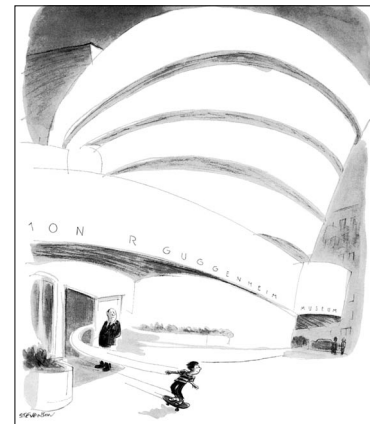
## Achieving Landmark Status

In 1990 the New York City Landmarks Preservation Commission voted unanimously to designate the Guggenheim Museum an official landmark. It is the youngest building ever to receive such recognition.

What do we mean when we call a building a “landmark”? Can you name a landmark that you have visited? Why do you think it is considered a landmark? What building(s) would you nominate for official landmark status? Why?



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**ADDITIONAL RESOURCES**

## Vocabulary

**Architect:** an individual who designs and oversees the construction of a building

**Architecture:** the art and science of planning and building a structure; the elements of a building

**Avant-garde:** from a French military term meaning the “front line,” avant-garde art breaks with traditions and is considered radical and shocking when first introduced to the public

**Form follows function:** phrase coined by architect Louis Sullivan, an early mentor of Frank Lloyd Wright. This principle states that the function, or utility, of a building should govern its design.

**Geometric shapes:** forms that look as though they were made with a ruler, compass, or other drawing tool, including circles, rectangles, triangles, and ovals

**Non-objective art:** art that uses forms, shapes, and colors that are invented rather than observed

**Rectilinear:** consisting of straight lines

**Reinforced concrete:** concrete with steel rods embedded within to provide additional strength and support

**Rotunda:** a circular room covered by a dome

**Spiral:** a curve that winds around a fixed center point at a continuously increasing or decreasing distance from the point

**Ziggurat:** a temple tower of the ancient Assyrians and Babylonians, having the form of a terraced pyramid of successively receding stories

## Books

*The Solomon R. Guggenheim Museum*, Guggenheim Museum Publications, New York, 1994.

*Art of This Century: The Guggenheim Museum and Its Collection*, Tom Krens and Bruce Brooks Pfeiffer, Harry N. Abrams, Inc., New York, 1993.

*Towards a New Museum*, Victoria Newhouse (Monacelli Press, Inc. New York) 1998. Examines the role of architectural design in contemporary museums. (adult)

*Frank Lloyd Wright for Kids*, Kathleen Thorne-Thomsen, Chicago Review Press, 1994. Biography and activity book. (middle grades)

*Architecture in Education: A Resource of Imaginative Ideas and Tested Activities*, Foundation for Architecture, Philadelphia, 1986.

*There Goes the Neighborhood: 10 Buildings People Loved to Hate*, Susan Goldman Rubin, Holiday House, New York, 2001.

*Natural Art Forms: 120 Classic Photographs by Karl Blossfeldt*, Dover Pictorial Archive Series, Dover Publications, Inc., New York, 1998.

## Video

*Frank Lloyd Wright*, a film by Ken Burns and Lynn Novick, documentary 160 minutes, available through <http://www.pbs.org/flw/>



## Web sites

Solomon R. Guggenheim Museum  
<http://www.guggenheim.org/>

Frank Lloyd Wright Foundation  
<http://www.franklloydwright.org/>

Great Buildings Online  
[http://www.greatbuildings.com/gbc/architects/Frank\\_Lloyd\\_Wright.html](http://www.greatbuildings.com/gbc/architects/Frank_Lloyd_Wright.html)

Art on the Web: Architecture Links  
[http://www.bc.edu/bc\\_org/avp/cas/fnart/archweb\\_frames.htm](http://www.bc.edu/bc_org/avp/cas/fnart/archweb_frames.htm)

The World-Wide Web Virtual Library: Architecture  
<http://www.clr.toronto.edu:1080/VIRTUALLIB/arch.html>

A Digital Archive of American Architecture  
[http://www.bc.edu/bc\\_org/avp/cas/fnart/fa267/FLW.html](http://www.bc.edu/bc_org/avp/cas/fnart/fa267/FLW.html)

Karl Blossfeldt's close-up photography of plant forms  
<http://www.flash.net/~pdnb/Blossfeldt/blossfeldt1.html>  
<http://www.artphiles.com/photofiles/KB.html>

## Other Guggenheim Museums

There are other Guggenheim museums located in cities around the world. The museum Web site, [www.guggenheim.org](http://www.guggenheim.org), provides additional information about the architecture, exhibitions, and programs of these Guggenheim museums.

**The Peggy Guggenheim Collection**, located in a Palazzo (Palace) on the Grand Canal in Venice, Italy, features a rich collection of objects ranging in style from Cubism and Surrealism to Abstract Expressionism, and its garden is home to a world-class collection of modern sculpture. Peggy Guggenheim (1898–1979), an avid collector and art-world figure, was also Solomon Guggenheim's niece.

**Guggenheim Museum Bilbao** was built by the Basque government and is managed by the Solomon R. Guggenheim Foundation. It provides more than 170,000 square feet of exhibition space and is part of a far-reaching plan to transform Bilbao into a major metropolitan center. The building, opened in 1997, was designed by Frank Gehry and has been hailed by critics worldwide as an architectural masterpiece.

**Deutsche Guggenheim Berlin** is the result of a partnership between the Solomon R. Guggenheim Foundation and Deutsche Bank. It establishes a small exhibition space on the historic Unter den Linden, close to the Brandenburg Gate and at the center of one of Europe's most dynamic cities.

**The Guggenheim Hermitage Museum** houses masterworks from the collections of both the Guggenheim Museum and the State Hermitage Museum in St. Petersburg, Russia. The museum's exterior and interior walls have been constructed with panels of Cor-Ten steel, which has never before been used as the structure of a museum gallery.



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- p. 4 Hilla Rebay with one of her collages, ca. 1929–30. Courtesy The Hilla von Rebay Foundation.  
Frank Lloyd Wright during construction of the Solomon R. Guggenheim Museum. Photo by William H. Short.
- p. 7 Vasily Kandinsky, *Composition 8*, July 1923. Oil on canvas, 55 1/8 x 79 1/8 inches. Solomon R. Guggenheim Museum, Gift, Solomon R. Guggenheim 37.262.
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A project of the Sackler Center for Arts Education  
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The Sackler Center for Arts Education was made possible by a founding gift from the Mortimer D. Sackler Family. Additional support was provided by Peter B. Lewis; Gail Engelberg; News Corporation; State of New York, Governor George E. Pataki; William Randolph Hearst Foundation; The Booth Ferris Foundation; Tandberg; J.P. Morgan Chase Foundation; Agnes Varis; Cisco Systems, Inc.; Fujitsu General America, Inc.; The Barker Welfare Foundation; and The Norman and Rosita Winston Foundation.

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This publication was made possible by the Caroline P. and Charles W. Ireland Foundation.



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