
**CREATIVE LIVING
RESIDENTIAL ARCHITECTURE IN
MoMA'S COLLECTION**

A Guide for Educators

The Teacher Information Center at The Museum of Modern Art

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A NOTE TO EDUCATORS

It is our pleasure to present this new educators guide featuring seven homes designed by twentieth-century architects, drawn from the architecture and design collection of The Museum of Modern Art. These projects were selected for their innovative design and use of materials. Some of the buildings may depart radically from your students' expectations of what a home should be—in some cases, the client, or individual who has hired an architect, has played as important a role as the architect in the outcome of the final design and construction of the house. The guide provides an historical and intellectual exploration of the design process, architectural choices, and the relationship between the homes, the people who have lived in them, and their immediate environments.

The guide has been organized chronologically so that students can reflect upon the stylistic and technological changes that took place during the twentieth century. Each section includes images, information about the architect and the people who lived in the house, and series of questions that you may want to use in discussions with your students. We have also included glossaries and suggestions for research projects and art activities. Some questions your students might consider when using this guide are: What is the role of the architect? What kinds of choices did the architect make in designing a particular home? What was it like to live in a particular home? How did critics or other people react to the house during the time it was built? What were some of the historical events that may have played a role in the design of the house?

This guide can be tailored to any age group within the K–12 range. You may communicate the information to your students using language appropriate to their age level. There are many ways to incorporate a discussion about architecture and design in the classroom, and it is our hope that this guide will be flexible and useful in a wide range of classroom settings. You may choose to use the guide as part of a module about design, urban history, or engineering. You may decide that some of the activities and projects will not resonate in your classroom, either because of the nature of the work or the age of your students. Feel free to pick and choose among the activities and to use the lessons in any order that you find appropriate.

In choosing to focus on residential architecture, we hope that students without any expertise in the field of architecture can relate to the issues and challenges of creating intelligent, well-designed living spaces. Future guides to MoMA's architecture and design collection will explore urban design, engineering feats (such as the skyscraper), and other essential aspects of architecture and design. If you would like to share with us how you have used this guide, or have suggestions for future MoMA educator guides, please write to us at tic@moma.org. We are eager to make MoMA's architecture and design collection available to teachers and students, and your feedback is valuable to us.

USING THE EDUCATORS GUIDE

The goal of this educators guide to residential architecture is to encourage students to consider how architects shape the different ways that people live in their homes. No specialized knowledge about architecture is necessary for discussing the works in this guide—every student has experienced what it is like to live in a home, and thus has the analytical tools for understanding and critiquing residential architecture. All of the sections in this guide should be carefully reviewed. Although the houses are arranged chronologically according to the date each home was designed, activities in this guide may be used selectively and nonsequentially.

IMAGES

The CD-ROM that comes with this guide contains photographs and models, drawings, and plans of the houses (your classroom should be equipped with a computer and LCD projector). Each section includes suggested questions for discussion based on these images. The images provide a general overview of the houses and cannot effectively address issues of scale or the experience of being in a house, something that can only be accomplished with a site visit. If you wish to pursue exercises that address scale and other technical concerns, please consult the Selected Bibliography and Resources section on page 34.

ACTIVITIES

The purpose of the activities in the Introductory Activities section is for students to explore their immediate surroundings and to make connections between their own experiences and the concepts discussed here. Through these activities, your students will begin to develop a language for discussing and looking at architecture. Please feel free to tailor the activities to the age level of your students.

The activities in the Houses section were created so that written and hands-on projects could be paired with the discussions of the houses. We encourage you to use these activities either as introductions or as follow-ups to your discussions.

No specific time frames have been provided for the completion of any given activity—you may tailor an activity to last for a single class period or to be a long-term project. For most of the activities, your students will need a notebook, a journal, or individual sheets of paper, and plain or colored pencils or pens.

RESEARCH PROJECTS

In many cases, the materials in this guide will provide opportunities for in-depth research on specific architects, architectural styles, or innovations in building techniques. We have suggested some topics, to which we encourage you to add your own.

DISCUSSION TECHNIQUES

You may want to take a personal approach to introducing students to the houses in this guide. You can include the following questions as part of your discussion:

- **What might it be like to live in this house?**
- **How is this house different from your own home?**
- **Would you like to live in this house? Why or why not?**
- **How would you describe the area around the house?**

Encourage dialogue and debate by asking your students to respond to each others' observations and interpretations. **Restating** students' responses, periodically **reviewing** students' comments, and **summarizing** the discussion all help to validate students' thoughts, focus the discussion, and generate additional ideas about a project.

Using phrases such as "might be," "perhaps," "seems like," "looks like," and "as if" encourages multiple interpretations of the project under discussion.

FOR FURTHER CONSIDERATION and SELECTED BIBLIOGRAPHY AND RESOURCES

A bibliography and resources section has been provided for teachers and students to use in conducting research. The resources recommended here provide further information on the houses and architects in this guide, general architectural topics, and more classroom activities. A section called "For Further Consideration" has also been provided, which contains additional suggested discussion questions, research projects, and ideas for class field trips.

GLOSSARIES

Glossaries of architectural and art historical terms are included in the Houses section.

INTRODUCTORY ACTIVITIES

INTRODUCTORY DISCUSSION

What Does an Architect Do?

Have your students brainstorm some ideas. Consult a dictionary, reference guide on architecture, or the bibliography and online resources in this guide for further information.

Discuss the role of the architect. Ask your students the following questions:

- **What are the steps in designing and building a home? What kinds of choices need to be made?**
- **What kinds of tools and materials might architects need to do their work?**

Have your students make a list on the blackboard of all the different steps that might be taken to design and build a home. Record your students' ideas. After you have discussed all of the works in this guide, look back to see if your students' ideas have changed or remained the same. If possible, contact an architect for input on, for example, technical questions or design and building processes—perhaps one of your students has an architect for a parent, or you could try your local office of the American Institute of Architects (www.aia.org).

HOMES AS PART OF A LARGER ENVIRONMENT

This guide features houses built in *rural*, *suburban*, and *urban* settings. *Urban* is commonly defined as describing a city (a state-chartered municipality) with a local government and shared public services, such as electricity, water, gas, telephone, and sewers. *Suburban* describes an area close to a city, also known as the city's outskirts, that is primarily residential. *Rural* describes an area that is not as densely populated as urban or suburban areas, and whose industry is predominantly agricultural. According to the U.S. Census Bureau, rural areas are defined as having a population of less than 2,500.

- **What types of buildings do you typically find in urban, suburban, and rural areas? Describe them.**
- **How would you identify your neighborhood: urban, suburban, or rural? Name some of the characteristics of your neighborhood that support your response.**

STYLE

Another element that is important to architecture is *style*. Architects often talk about style when discussing the design of a building. In this guide you will see specific references to architectural styles, for example, "International Style." Generally, the term *style* is used to describe and categorize the way something looks. You can describe the style of a building based on its appearance—that is, what it looks like and what it is made of.

DISCUSSION QUESTIONS

- In your own words, how would you define *style*? What are some other examples of how the word is used? Compare your ideas to those of your classmates.

LOOKING AT YOUR OWN HOME

Looking at houses is an ideal introduction to the concepts that define architecture. As a point of departure, students should take a close look at their own home. They should explore how their living experience is shaped by their home, whether they live in an apartment, a house, or on a farm. Your students should also consider the relationship between their home and the environment around it, be it a crowded city block, a country road, or a waterfront.

Begin by asking your students to prepare a written description of their home. You can use the following questions to guide your students. Then ask them to share their ideas with the entire class.

- Describe your home, starting with the exterior. What does your home look like? How would you describe the different parts of your home, such as the doors, the windows, and the roof? Think of the shapes and colors that you see.
- What materials were used to build your home (brick, concrete, wood, glass, metal, etc.)?
- Describe the area around your home. How would you describe your street? You may include such details as how many homes or buildings are on your block, how tall the buildings are, or, if you live in a rural area, whether or not your home is surrounded by trees or fields. Identify the kinds of smells and sounds in your neighborhood/area.
- What is the climate like? Does it change from season to season or do you live in an area that is always either cold or warm? Do you think that the way your home was built has any relationship to the climate? Explain.
- How long have you lived in your home? Have there been many changes to your neighborhood/area over a period of time? For instance, have the number of homes on your street changed? Has the number of people living in your neighborhood changed? Have you noticed any new buildings, such as stores, a post office, or a school?

Looking at the inside of your home, consider the following questions:

- How many people live in your home? How many rooms does your home have?
- Make an inventory, or list, of all the rooms in your home. What is each room used for? What is the size of each room? How many rooms of the same type do you have? For example, do you have two bedrooms? Do you have more than one bathroom? How many

windows does each room have, if any? What do you see from each window? What is the temperature like in each room? Are some rooms warmer or colder than others?

- How do you enter your home (for example, up a flight of stairs, into a three-foot-wide hallway)? How would you describe the layout of your home? Which rooms connect to one another?

Alternatively, this activity can be done using your school building.

MAPPING YOUR OWN HOME

Materials needed for this activity: plain or graph paper (8 ½ x 11" or larger), pencils, rulers, and erasers.

Have your students create maps, or *floor plans* (drawings that show a bird's-eye view of a space), of their home. Your students can use simple shapes and a *key* (map legend) to identify the various details, such as furniture and windows. You may also introduce concepts of scale and ratio at this time. For example, your students can decide how many feet will be represented by each inch. Before they begin drawing, ask your students to consider what information they would like to include on their maps. Another option is to have your students map one room in their home, such as the bedroom. Please see the Selected Bibliography and Resources section of this guide for information on examples of architectural plans.

DISCUSSION QUESTIONS

- What kind of information did you include in your floor plan, and why?
- What was challenging about this exercise? How did you resolve these challenges?

HOUSE STORIES

Have your students assume the role of a reporter for a local newspaper or magazine, and ask them to select one of the homes in this guide as their focus. Your students can write an article from the perspective of the residents and neighbors, or the architect. For pertinent information about the home, they can consult the Houses section and the bibliographic and online resources in this guide.

You can have your students work in groups and you can assign roles so that one person is the reporter and the others the residents, the neighbors, and the architect.

QUESTIONS FOR CONSIDERATION

1. The residents and neighbors of the house
 - How would you (resident) describe this house? What is it like to live here?
 - How would you (neighbor) describe this house? What do you think of it?

- **What do you (resident) like most about your home? What do you like least? Why?**
2. The architect
- **What factors influenced your design?**
 - **Describe your work process. Did you use drawings and models?**
 - **How would you describe your working relationship with your client? Did you agree on many ideas?**
 - **Would you make any changes or additions to your design (for example, to the exterior or interior, the furniture, the building materials)? If so, what would they be?**

MORE HOUSE STORIES

Ask your students to select one of the homes in this guide. Have them write a story from the perspective of a resident. The story can describe what it might have been like to live in the house. It can take place at the time the house was built, or students can imagine what it would be like to live there today.

WHAT DOES YOUR HOUSE LOOK LIKE?

Suggestion to the teacher: you can pair this exercise with others in the guide, such as a Research Project or a Follow-Up Activity.

Ask your students to draw the outside of their home from the front, or have them draw their house from multiple perspectives, noting how much new information about the house is captured from each different view.

DISCUSSION QUESTIONS

- **What do you like best about your home? Why?**
- **If you could make changes to your home, what would they be?**

DESIGNING YOUR NEIGHBORHOOD

For this activity, you can have your students take a picture of the front of their home, including a view of the areas to both sides (adjacent buildings, the yard, a road, etc.), or you can supply a photo of a home near your school, or a street near the school, that is familiar to most of the students. Make photocopies of the pictures with enough space on one side of the sheet for students to insert a design of their own making. Ask your students to design

a home (an apartment building or a house) next to the building(s) shown in the picture. Students should consider how the existing buildings(s) will impact their design.

DISCUSSION QUESTIONS

- Describe your design. If you were to build your design, what kinds of materials would you use? Why?
- What kinds of features would you like your home to have? For example, would there be a garage, a garden or pool in the backyard, or any special indoor features?
- How many people would live in your home? How would the design of your home affect the way the residents interact?
- Compare your design to the building(s) in the picture. Do you see any similarities or differences? How did the design of the other building(s) affect your own design?

DESIGNING YOUR DREAM HOME

Ask your students to begin this activity by writing a description of their dream home. Then students can draw a picture of this home using pencils, pens, markers, cut-out pieces of paper (collage), or any other method they prefer.

QUESTIONS FOR CONSIDERATION

- Where would your dream home be located?
- What would your dream home be made of? How large would it be? How many rooms would it have, and what would you use the rooms for? What indoor or outdoor features would you include (a pool, a basketball court, an ice-skating rink, etc.)?
- Would you invent new types of appliances or features for your home? What would you name your dream home?

HOUSES

HOUSE ONE: New York City Brownstones at 4, 6, and 8 Fifth Avenue (architect/s unknown); later replaced by 2 Fifth Avenue (Emery Roth and Sons). 1952



IMAGE 1: Berenice Abbott. *Fifth Avenue nos. 4, 6, 8*. 1936. Gelatin silver print, 15 x 19¼" (38.1 x 48.9 cm). The Museum of Modern Art, New York. Thomas Walter Collection. Purchase. © Berenice Abbott/Commerce Graphics Ltd, Inc., New York



IMAGE 2: *2 Fifth Avenue*. 2003. Digital photograph: Francesco Tonin

DISCUSSION QUESTIONS

- Let us begin by looking at Image 1. What do you see in this picture? How would you describe the buildings? What do you suppose they were used for? How can you tell? What do you notice about the area around the buildings? Provide as many details as you can.
- Compare Abbott's photograph *Fifth Avenue nos. 4,6,8* to the photograph taken in 2003 of 2 Fifth Avenue, which occupies the same site. What kinds of differences do you notice between these two images? Do you see any similarities? Look carefully at the area around the buildings and describe the scenes.
- How would you compare the buildings in your neighborhood to the ones in Image 1? How would you compare them to the one in Image 2? Are there any similarities or differences?

ABOUT 4, 6, AND 8 FIFTH AVENUE; LATER 2 FIFTH AVENUE

Fifth Avenue nos. 4, 6, 8, by Berenice Abbott, shows three buildings located on Fifth Avenue, north of Washington Square Park, in New York City. Built in 1898 as private homes, 4, 6, and 8 Fifth Avenue had stables, one of which is visible in the photograph next to 4 Fifth Avenue, to the left. The building on the far right, 8 Fifth Avenue, belonged to John Taylor Johnston, the first president of The Metropolitan Museum of Art, New York. His home was made of Vermont white marble, which was unusual at the time; during the nineteenth century, buildings on the East Coast were typically made of brick or of *brownstone*.

Abbott took this photograph in 1936, as part of the Federal Art Project of the Works Progress Administration. The FAP was formed in order to provide work for artists during the Depression as well as to promote the importance of the arts to a larger public. At that time, 8 Fifth Avenue had been divided into smaller apartments and was called Marble

House. Sixteen years after Abbott took this picture, 4, 6, and 8 Fifth Avenue were torn down and replaced by a single apartment building, 2 Fifth Avenue, as seen in Image 2. It is one of many residential and commercial buildings around New York City designed by the architectural firm Emery Roth and Sons. Incidentally, they were also the consulting architects for the World Trade Center, built in the 1960s.

RESEARCH PROJECT

Research the architectural styles predominant in New York City during the mid-to-late 1800s. What kinds of building materials were widely used, and why? Why were attached brownstones such as the ones shown in the Abbott photograph so common at the time?

GLOSSARY

Brownstone: A type of dark or reddish-brown sandstone that was widely used in the Eastern United States during the mid- and late nineteenth century; a row house, or unbroken line of houses sharing one or more sidewalls with its neighbors, made of brownstone.

Commission: A request for, or to request, the design and production of a work of art or architecture.

FOLLOW-UP ACTIVITY

Exploring a Brief History of Your Neighborhood

For this activity, students should begin by compiling a brief history of their neighborhood, documenting changes that have occurred over time. These changes can include the development of new homes and businesses, population growth or decline, etc.

Ask your students to explore their neighborhood (or a part of it) and to document their observations. They can choose to write a description or to create a map, and they may take photographs. Then have your students interview someone who has lived in their neighborhood for a long time, such as a parent or other family member, friend, teacher, or community leader. Ask your students to compare their own documentation of their neighborhood to the account that they obtain during their interview.

DISCUSSION QUESTIONS

- **How has this neighborhood changed over the last ten or twenty years? Have new buildings been built? What types of new buildings? Were any old buildings torn down to make room for new buildings? What was the community's reaction to these changes? Did people support or object to the changes? Why?**
- **Has the population of this neighborhood changed? If the population has increased or decreased, why do you think this has happened?**
- **How would you describe the kinds of businesses most commonly found in this community? Have the types of businesses changed over the last ten or twenty years? If so, why?**

PROJECT EXTENSION

As a way of further exploring your neighborhood's history, you can consult the local chapter of an historical or preservation society, a museum, or the American Institute of Architects (AIA). Find out if you and your students can view historical documents, architectural plans, or archival photographs. You can use these resources to try and locate older photographs of these areas and compare them to photographs taken by your students.

**HOUSE TWO: The Red and Blue House—Schröder House, Utrecht,
The Netherlands. 1924**

Gerrit Rietveld (Dutch, 1888–1964), with Mrs. Truss Schröder-Schräder (Dutch, 1889–1985)



IMAGE 3: Exterior view. nd. Centraal Museum. Photo: Manuel Kubitzka. © 2004 Centraal Museum Utrecht



IMAGE 4: Exterior view. nd. Centraal Museum. Photo: Manuel Kubitzka. © 2004 Centraal Museum Utrecht

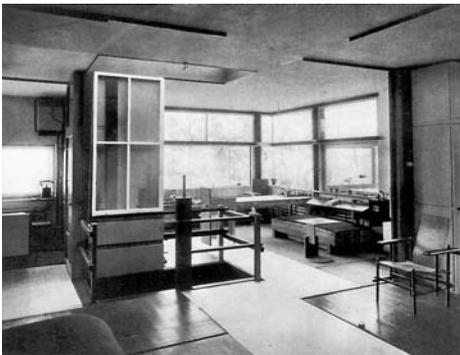


IMAGE 5: Interior view. nd. Photo courtesy the Architecture and Design Study Center, The Museum of Modern Art, New York



IMAGE 6: Interior view. nd. Photo courtesy the Architecture and Design Study Center, The Museum of Modern Art, New York



IMAGE 7: Model. 1965. Wood, 19 x 30³/₁₆ x 21¹/₁₆" (48.3 x 76.7 x 53.8 cm). Modelmaker: Gerard van der Groenekan. The Museum of Modern Art, New York. Gift of Mrs. Phyllis B. Lambert. © 2004 Artists Rights Society (ARS), New York/Beeldrecht, Amsterdam



IMAGE 8: Gerrit Rietveld. Red Blue Chair. c. 1923. Painted wood, 34¹/₂ x 26 x 33" (86.7 x 66 x 83.8 cm). The Museum of Modern Art, New York. Gift of Philip Johnson

ABOUT THE SCHRÖDER HOUSE

Built in 1924, the Schröder House is located in Utrecht, The Netherlands. The house was named after its owner and one of the designers, Mrs. Truss Schröder-Schräder, who *commissioned* the architect, Gerrit Rietveld, to design a house and furnishings that would encourage her and her three children to live and think unconventionally. Mrs. Truss Schröder-Schräder assumed a collaborative role, working very closely with Rietveld to make decisions about the layout of the house and the functions of the rooms.

The floor space of the Schröder House measures just 21 x 30', but it has some distinctive features, including an unusual layout. When Mrs. Truss Schröder-Schräder lived in the house with her three children, there were a studio, a library, a workroom that doubled as a maid's room, and an eat-in kitchen on the ground floor. The second floor contained the living and dining areas, a stove, and the bedrooms. Mrs. Truss Schröder-Schräder and her son had their own rooms, and her two daughters shared a room. There were sliding partitions to create either large open spaces or smaller enclosed ones. Each room was equipped with its own sink, cupboard, and electrical outlet so that family members could prepare their own meals. These features were intended to encourage family members to live more independently.

Rietveld explained how he and Mrs. Truss Schröder-Schräder chose the site for the house:

No one had ever looked at this little lane before this house was built here. There was a dirty crumbling wall with weeds growing in front of it. Over there was a small farm. It was a very rural spot, and this sort of fitted in. It was a deserted place, [...] a real piece of no-man's-land. And we said, 'Yes, this is just right, let's build it here.' And we took this plot of ground and made it into a place with a reality of its own. It didn't matter what it was, so long as something was there, something clear. And that's what it became. And that's always been my main aim: to give to a yet unformed space, a certain meaning.¹

At the time the Schröder House was built, the entrance did not face the main street but was located on the right side of the house, facing an open meadow. However, the area around the Schröder House went through many changes. For example, a highway was built in 1963, which obstructed the house's original view.

DISCUSSION QUESTIONS

Show your students Images 3 through 7

- **Describe the Schröder House. Notice the shapes and colors. How would you describe them? Do they repeat? If so, where? How are the colors and shapes arranged?**
- **Take a look at the setting around this house. How would you describe the other nearby homes? What kinds of comparisons can you make between the other buildings and the Schröder House?**
- **How would you compare this house to your own home or other houses you have seen? What are the similarities and differences?**
- **If you could choose a new location for the Schröder House, what would it be? Why?**

1. Lenneke Büller, Bertus Mulder, Frank den Oudsten, and Paul Overy, *The Rietveld Schröder House* (Cambridge, Mass.: MIT Press, 1988), 52.

ABOUT THE RED BLUE CHAIR

Originally intended for mass-production, Rietveld's Red Blue Chair was based on an earlier, unpainted version he had made around 1918. In this 1923 version, Rietveld painted the chair with the same primary colors used on a crib he had built for his son four years earlier.

Rietveld's commission of the Schröder House included designing all of the furniture. Although Mrs. Truss Schröder-Schräder added her own pieces of furniture to the house when it was completed, they were painted to match the house's colors and design.

DISCUSSION QUESTIONS

Show your students Image 8

- **How would you describe this chair?**
- **What do you think it would feel like to sit in this chair?**
- **How does this chair compare to other chairs that you have seen?**

FOLLOW-UP ACTIVITIES

1. What is the largest room in your house?

When Rietveld and Mrs. Truss Schröder-Schräder designed the Schröder House, they made the size of the rooms proportionate to the amount of time that would be spent in them.

- **Make a list of all of the rooms in your home. Start with the room in which you spend the most amount of time, and finish with the one in which you spend the least amount of time.**
- **When you are done with your list, think about the size of the rooms versus the amount of time you spend in them. How do they compare? If you could alter the size of the rooms in your home, how would they change according to the amount of time you and your family spend in them?**

2. What was it like to live in the Schröder House?

After the Schröder House was built, many critics praised it for its “break with the past [and] celebration of color and abstract form.”²

- **Write a short essay in response to the above comment. Do you agree or disagree? Why?**

3. What would it be like for you to live there?

Although the Schröder House earned critical acclaim, Mrs. Truss Schröder-Schräder's children were often teased by their classmates, and neighbors frequently walked past the house to stare. Mrs. Truss Schröder-Schräder once described what it was like for her family to live in the Schröder House: “It wasn't so nice for the children. On one occasion my daughter Hannecke came home from school quite scarlet in the face, crying her eyes out, so I asked her what was the matter. She sobbed, ‘I told a lie, because they said to me, “You live in that loony house” and I said that I didn't live in that loony house.’ Something like that was very hard for a child to cope with.”³

- **Create your own story. Consider that these comments about the Schröder House were made around the time it was built, in the 1920s. If you lived in the Schröder House today, do you think your neighbors would react the same way? Why or why not? How do you suppose your neighbors and classmates would react if the Schröder House had just been built in your town or city?**

2. Alice T. Friedman, *Women and the Making of the Modern House: A Social and Architectural History* (New York: Harry N. Abrams, Inc., 1998), 85.

3. *Ibid.*, 79.

ABOUT GERRIT RIETVELD AND MRS. TRUSS SCHRÖDER-SCHRÄDER

The son of a furniture-maker, Gerrit Rietveld was born in Utrecht, Holland (now The Netherlands), in 1888. When he was twelve years old, Rietveld opted to work in his father's workshop instead of attending school. Other experiences included taking architecture classes at night and working as a draftsman for a jeweler. In 1917 Rietveld opened his own furniture-making business, following in his father's footsteps. Seven years later, he turned to architecture full-time. The Schröder House represents his first building design.

Rietveld's collaboration with Mrs. Truss Schröder-Schräder on the Schröder House was the first of many. He collaborated with Mrs. Truss Schröder-Schräder on architectural and design projects throughout his life, maintaining an office in her home for several years. He also designed schools, churches, stores, furniture, and the Vincent van Gogh Museum in Amsterdam, a project in collaboration with other architects.

Rietveld was also involved in a movement of Dutch artists, architects, and designers called the *De Stijl* group. *De Stijl*, which in Dutch means "the style," was the name of a fine-arts magazine published between 1917 and 1932. The *De Stijl* artists' aim was to develop a pure visual language of expression, and, as can be seen in the Schröder House, they liked to use basic forms and colors in their designs (see Image 8, Rietveld's Red Blue Chair, for another example of *De Stijl*).

Born in Deventer, Holland (now The Netherlands), in 1889, Mrs. Truss Schröder-Schräder originally trained to become a pharmacist. However, she also cultivated a lifelong interest in art, architecture, literature, and politics. Her older sister An, a writer, introduced her to other writers, politicians, and artists, including members of the *De Stijl* group. In 1911, Mrs. Truss Schröder-Schräder moved to Utrecht and married Frits Schröder, a lawyer, and in 1921 they commissioned Rietveld to design and furnish a room for her. After her husband's death, in 1923, Mrs. Truss Schröder-Schräder decided to have a new home built. Once the Schröder House was completed, in 1924, she lived there for sixty years.

After the death of his wife, Rietveld lived with Mrs. Truss Schröder-Schräder in the Schröder House until his own death, six years later, in 1964. Shortly before Mrs. Truss Schröder-Schräder's death, in 1985, she donated the Schröder House to the municipality of Utrecht. The house was restored as closely as possible to its original condition, and in 1987 it was opened to the public as a museum. The United Nations recognized the Schröder House as a World Heritage Site in 2000.

RESEARCH PROJECT

Consult books and Web sites on art and architecture (see the Selected Bibliography and Resources section in this guide) for definitions of the term "De Stijl." Find out who the artists were, what they were trying to achieve, and when and where they lived. Do you think the efforts of the *De Stijl* group still have an impact on our lives today? Present your ideas in a short paper.

GLOSSARY

De Stijl: A Dutch word meaning "the style," *De Stijl* was the name of a fine-arts magazine published in Leiden from 1917–1932. The term also refers to a group of artists and architects whose style of expression was based on the use of primary colors, rectangular shapes, and asymmetrical balance. The *De Stijl* movement was also a direct response to the chaotic and destructive events of World War I, and its members believed that developing a new artistic style represented a means of rebuilding, and of creating a harmonic order. Rietveld's Red Blue Chair (Image 8) incorporates many design principles of *De Stijl*.

**HOUSE THREE: The House on Stilts—Villa Savoye, Poissy-sur-Seine, France.
1929–31**

Le Corbusier (Charles-Édouard Jeanneret) (French, born Switzerland. 1887–1965), with Pierre Jeanneret (Swiss, 1896–1967)

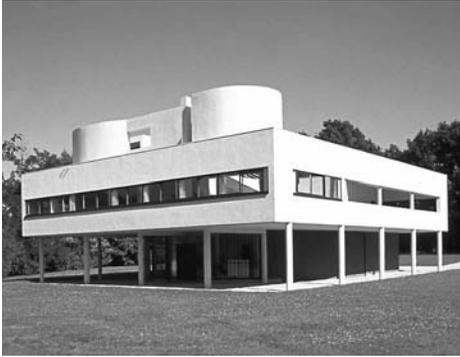


IMAGE 9: Northwest and southwest facades. 1995–99. Photo: Paul Koslowski. Fondation Le Corbusier. © 2004 Artists Rights Society (ARS), New York/ADAGP, Paris



IMAGE 10: Exterior view. 1930. Photo courtesy the Architecture and Design Study Center, The Museum of Modern Art, New York



IMAGE 11: Entrance hall. 1995–99. Photo: Paul Koslowski. Fondation Le Corbusier. © 2004 Artists Rights Society (ARS), New York/ADAGP, Paris



IMAGE 12: Living room and roof garden. 1995–99. Photo: Paul Koslowski. Fondation Le Corbusier. © 2004 Artist Rights Society (ARS), New York/ADAGP, Paris



IMAGE 13: Master apartment bathroom. 1995–99. Photo: Paul Koslowski. Fondation Le Corbusier. © 2004 Artists Rights Society (ARS), New York/ADAGP, Paris



IMAGE 14: Model. 1932. Wood, aluminum, and plastic, 11 ¼ x 22 ½ x 25 ½" (28.6 x 57.2 x 64.8 cm). Modelmaker: Theodore Conrad. The Museum of Modern Art, New York. Purchase. © 2004 Artists Rights Society (ARS), New York/ADAGP, Paris



IMAGE 15: Le Corbusier, with Pierre Jeanneret and Charlotte Perriand (French, 1903–1999). Chaise Longue. 1928. Chrome-plated steel, fabric, and leather, 26 $\frac{3}{8}$ x 23 x 62 $\frac{3}{8}$ " (67 x 58.4 x 158.4 cm). The Museum of Modern Art, New York. Gift of Thonet Industries, Inc.

ABOUT THE VILLA SAVOYE

Designed by Le Corbusier (Charles-Édouard Jeanneret) and his cousin, Pierre Jeanneret, with interior spaces and furnishings by Charlotte Perriand, the Villa Savoye was named after its original owners, Pierre and Eugénie Savoye. Intended as a country home for the family, Villa Savoye was built between 1929 and 1931 on an open area of farmland in the town of Poissy, approximately twenty-five miles outside of Paris.

The Savoye family was the first to own a car in the area, and Le Corbusier included features in the design of the house to accommodate the automobile. For instance, there is a ramp for the car leading into the garage and the driveway, the curve of which equals the turning radius of a large car. The interior of the house, which also contains ramps (as well as a spiral stairway) echoes the ramps and curve of the driveway. The Villa Savoye has other features that were considered unusual at the time the house was built, such as *pilotis*, or reinforced concrete columns (or stilts), and a flat roof. A *ribbon window* surrounds the ground floor of the house. Just inside the entrance on the ground floor there is a washbasin for guests to clean their hands in and an area along a wall where they can hang up their coats. The upper levels of the house are accessible by ramp or spiral stairway. On the first floor, the bedrooms, guest room, kitchen, bathroom, and living room are arranged in an L-shape around a terrace. The bathroom, built for Mrs. Savoye, features a bathtub and a lounge “chair” made from blue and black tiles; the tub is built into the floor. The house’s flat roof contains a garden.

Although Mrs. Savoye retained ownership, the family vacated Villa Savoye during World War II and it suffered extensive damage. After the war, the town of Poissy attempted to expropriate the house and demolish it in order to build a school in its place. The deteriorated state of Villa Savoye, along with its impending destruction, attracted international concern. Le Corbusier intervened and worked with the French Ministry of Culture to ensure Villa Savoye’s preservation. After Le Corbusier’s death, in 1965, the Ministry took gradual steps to restore the house and open it to the public as a museum.

DISCUSSION QUESTIONS

Show your students Images 9 through 14 of Villa Savoye.

- **Look closely at these images. List five words that describe this house. What do you see in the pictures that made you choose these words? Have your classmates share their responses. Did everyone select similar words? Do you notice any differences between people’s responses?**
- **Can you think of any similarities or differences between your home (or other houses you have seen) and Villa Savoye?**

FOLLOW-UP ACTIVITY

Le Corbusier once likened a house to a machine: “A house is a machine for living in. Baths, sun, hot water, cold water, warmth at will, conservation of food, hygiene, beauty in the sense of good proportion. An armchair is a machine for sitting in, and so on.”⁴ Some of the critics’ responses were not so enthusiastic. One particularly scathing review called the Villa Savoye an “alien space capsule that has just touched down on a Virgilian landscape.”⁵

The architect Frank Lloyd Wright also had a negative reaction to the Villa Savoye. He once referred to it as a “box on stilts.”⁶ He described Le Corbusier’s work as a “childish attempt to make buildings resemble steamships, flying machines, or locomotives.”⁷

Ask your students to write an essay that addresses the following:

- **Consider all of the above comments. Do you think the criticism of Le Corbusier’s design was fair or not?**
- **How do you suppose most people reacted when they saw Villa Savoye for the first time in the 1930s? Do you think people would have similar reactions today?**

FOR FURTHER EXPLORATION

Look at the image of Rietveld’s Red Blue Chair (Image 8). What kinds of comparisons can you make between the chair and Le Corbusier’s Chaise Longue (Image 15)? Consider the materials used, the shapes, and what the sensation of sitting in each chair might be.

ABOUT LE CORBUSIER (CHARLES-ÉDOUARD JEANNERET) AND PIERRE JEANNERET

The architect, painter, and lithographer Charles-Édouard Jeanneret was born in 1887, in La Chaux-de-Fonds, Switzerland. He later adopted the Huguenot name “Le Corbusier” as a way of acknowledging his ancestral heritage. Most of the residents in his town could trace their lineage to Huguenots who fled France during the sixteenth century to avoid persecution.

While he was growing up, Le Corbusier spent a lot of time with his father hiking near their home. He often carried small sketchpads with him, a habit that lasted throughout his lifetime. As a teenager, he enjoyed sketching the natural landscape in his area. Le Corbusier attended art school from the age of seventeen to twenty. His earliest design was a house for a local jeweler, which he completed when he was just eighteen years old. When he was twenty-three years old, he spent five months working for Peter Behrens, a Berlin-based architect who was recognized at the time for his designs of factories and houses. One of Le Corbusier’s colleagues included another young architect, Ludwig Mies van der Rohe (see House Five). In 1917, Le Corbusier moved to Paris, where he established an architectural practice with his cousin, Pierre Jeanneret (born 1896, in Geneva). Both men gained fame for their role in developing the International Style of architecture. From 1922 to 1940 and from 1951 to 1955 they collaborated on various projects. Their firm attracted many young, promising architects because of the innovation of their designs, particularly houses, which reflected their commitment to using modern materials like concrete and steel. Another notable achievement was their obtainment of a patent for horizontal sliding windows.

Along with the Villa Savoye, Le Corbusier and Pierre Jeanneret completed projects in Europe, North and South America, Asia, and Africa, including homes, furniture, churches, large-scale urban housing, factories, and government buildings. Le Corbusier was one of a team of architects that designed the United Nations headquarters in New York City, completed in 1953. Le Corbusier died in France, in 1965; Pierre Jeanneret died two years later, in Geneva.

4. Le Corbusier, *Towards a New Architecture*, trans. Frederick Etchells (New York: Holt, Rinehart and Winston, 1986), 89.

5. Charles Jencks, *Le Corbusier and the Continual Revolution in Architecture* (New York: The Monacelli Press, Inc., 1989), 173.

6. *Ibid.*, 173.

7. Gwendolyn Wright, in *Frank Lloyd Wright: Architect*, Peter Reed and Terence Riley, eds. (New York: The Museum Modern Art, 1994), 86.

RESEARCH PROJECTS

1. Le Corbusier's Five Points of Architecture

The Villa Savoye incorporates Le Corbusier's five points of architecture, which he spelled out in his book *Vers une architecture*, 1923 (later translated into English, titled *Towards a New Architecture*), and which he believed were indispensable to successful design.

Pilotis. *Pilotis* are reinforced concrete columns, or stilts, that raise a structure off the ground. The use of pilotis in the Villa Savoye ensured that the inhabitants of the home would be elevated aboveground, promoting a hygienic lifestyle. (Hygiene was very important to Le Corbusier—Image 12 shows a washbasin inside the entrance of the Villa Savoye, where people could wash off any outside dirt before entering the home.)

Free Plan. A *free plan*, achieved through the separation of load-bearing columns from the walls, subdivides the space. The columns, not the walls, carry the weight of the building so that the walls can be placed anywhere.

Free Facade. A *free facade* works like a *free plan*, but vertically. Since columns, not walls, carry the weight of the building, windows can pierce the walls anywhere.

Ribbon Windows. *Ribbon windows* are long horizontal bands of sliding windows. As the Villa Savoye's facade is free of columns and does not support anything, windows can run along its entire width.

Roof Garden. A *roof garden* is for the enjoyment of the outdoors right on top of the home.

Using the resources in the back of this guide, have your students prepare a class presentation or write a paper in response to the following:

- **Explore other building designs by Le Corbusier and Pierre Jeanneret. How would you compare them to Villa Savoye? For example, do you notice similarities between the types of materials used? Do you think Le Corbusier pursued similar ideas in many of his designs? Can you find examples of Le Corbusier's five points in his other designs?**

2. International Style

The building designs of Le Corbusier, Pierre Jeanneret, and Ludwig Mies van der Rohe are often referred to as belonging to the *International Style* of architecture. This term was coined from a 1932 exhibition at The Museum of Modern Art called *Modern Architecture: International Exhibition*. The exhibition included Le Corbusier and Pierre Jeanneret, Mies van der Rohe, and Frank Lloyd Wright. Some of the distinguishing features of International Style architecture are its sleek, simple designs; use of materials such as concrete and metal; flat surfaces; and rectangular shapes.

Using the resources in the back of this guide, find out more about International Style. Learn more about critics' and other people's responses to International Style. Do you agree or disagree with what you have read? Why? Think about your own neighborhood, the area around your school, or places that you have visited. Do you see examples of International Style architecture in buildings today? Write an essay presenting your ideas.

GLOSSARY

International Style: International Style architecture is generally characterized by its use of materials such as steel, concrete, and glass, and its boxy structures and lack of decoration.

HOUSE FOUR: The House on a Waterfall—Fallingwater, Edgar J. Kaufmann House, Mill Run, Pennsylvania. 1935–37

Frank Lloyd Wright (American, 1867–1959)



IMAGE 16: View from downstream. 1992. Photo: Paul Rocheleau. © 1992, Paul Rocheleau



IMAGE 17: Living Room. 1992. Photo: Paul Rocheleau. © 1992, Paul Rocheleau



IMAGE 18: Model. 1984. Acrylic, wood, metal, expanded polystyrene, and paint, 40½ x 71½ x 47¾" (102.8 x 181.6 x 121 cm). Modelmakers: Paul Bonfilio, with Joseph Zelvin, Larry List, and Edith Randel. The Museum of Modern Art, New York. Best Products Company Architecture Fund. © 2004 Frank Lloyd Wright Foundation/Artists Rights Society (ARS), New York



IMAGE 19: Desk. 1936–39. Wood and painted metal. The Museum of Modern Art, New York. Purchase. Lily Auchincloss Fund

ABOUT FALLINGWATER

The architect Frank Lloyd Wright designed this house in 1935–37. Its name, Fallingwater, was derived from the waterfall running under the house. Fallingwater is located in Bear Run, Pennsylvania, and was a weekend retreat for the Pittsburgh department-store magnate Edgar J. Kaufmann and his family. The Kaufmann's had often enjoyed picnics on a large rock near the top of a waterfall on their property, and Wright decided that this point was the ideal location for the house. Through the use of different types of *cantilevers*, the architect built the three-story house right over the rocks and water. Its stone flooring

echoes the rocky landscape upon which it was built, and a staircase descends directly over the water. Wright designed most of the furniture for Fallingwater, which the Kaufmann family combined with their own pieces.

Fallingwater embodies Wright's design philosophy, which emphasizes the harmony between nature, man, and architecture. He once stated that "a building should grow easily from its site and be shaped to harmonize with its surroundings."⁸ Fallingwater also reflects Wright's interest in various architectural styles (particularly Japanese architecture) and different types of building materials. Wright often incorporated in his structures materials such as limestone and sandstone, which are commonly found in southwest Wisconsin, where Wright was born and raised. Wright's experimentation with materials and specific design motifs sometimes caused him unexpected problems. For instance, his use of horizontal, rather than traditional, angled roofs caused snow to accumulate in winter, which then melted and leaked into the houses. But Wright also incorporated design choices that were very effective. He always tried to select a site that would enable the house to receive full sunlight for at least part of the day. His buildings are also quite sturdy. Edgar Kaufmann, Jr., remembers that during a rare tornado in western Pennsylvania, in 1956, Fallingwater did not collapse.

The Kaufmann family often entertained at Fallingwater, and Albert Einstein was one of many notable guests. The family used the house as a weekend retreat until 1963, when, upon his father's request, Edgar Kaufmann, Jr., placed the house and the surrounding property under the care of the Western Pennsylvania Conservancy, in order to open the house to the public as a museum.

DISCUSSION QUESTIONS

- **Look closely at Images 16 through 18. How would you describe this house (for instance, what sorts of textures and shapes do you see)? Do you notice any other interesting features about this house? How would you compare it to other houses you have seen?**
- **Look at the setting around the house. Describe the natural setting in detail.**

ABOUT FRANK LLOYD WRIGHT

Born in 1867, Frank Lloyd Wright knew early on that he would become an architect. He was initially raised in a small farming community in Richland Center, Wisconsin. However, Wright's family relocated often as his father, a man of many trades, continuously looked for steady work around the country. Wright spent most of his summers on his maternal family's Wisconsin farm, where he developed a strong appreciation for nature.

In 1887, Wright moved to Chicago after studying architecture at the University of Wisconsin. He began working as a draftsman for Louis Sullivan, who was renowned at the time for his skyscraper designs. Early on in his career, Wright focused on designing homes for clients in the Midwest; these early designs, referred to as "Prairie Style," featured homes with gardens, and layouts of rooms in simple, geometric formations.

During his career, Wright expanded the scope of his work to include designs for churches, hotels, museums, office buildings, a synagogue, and furniture (see Image 19). He was extremely detail-oriented, sometimes even designing clothing for his clients that he insisted they wear in order to match the house. Projects included a church called Unity Temple, in Illinois; the Imperial Hotel, in Tokyo, Japan; and the Guggenheim Museum, in New York. The Iraqi government once commissioned Wright to design an opera house in Baghdad, but it was never built.

Wright also established a school in Arizona called the Taliesin Fellowship, where apprentices paid a fee to live and work with Wright. Their schedule included four hours a day of manual labor, from farming to preparing meals, along with working on the design of new

8. Anthony Alofsin, in *Frank Lloyd Wright: Architect*, 33.

buildings and restoring old ones. At Taliesin, Wright met Edgar Kaufmann, Jr., who introduced Wright to his father, leading to the commission of Fallingwater in 1934.

Wright died in Arizona, in 1959.

RESEARCH PROJECTS

1. Frank Lloyd Wright and Japanese Architecture

Traditional Japanese architecture was a major influence on Frank Lloyd Wright's work. Using the bibliographic and online resources in this guide, research and compare Fallingwater to a traditional Japanese home. Describe the similarities and differences between the two. Consider the building materials, the structural differences, and the geographical conditions. Learn more about other design influences in Wright's work. What were they, and why and how did Wright incorporate them? Present your ideas in an essay.

2. Usonia

Frank Lloyd Wright was a harsh critic of International Style (see Houses Three and Five). Its emphasis on modern technology and machine-made materials offended his own design philosophy, which centered on the use of natural materials, such as wood, and on the importance of craft. In response to International Style, Wright developed an ideal that he called "Usonia," which stands for the United States of North America. The Usonian philosophy advocated rural living, particularly homes and buildings representing prairie life, such as farmhouses and gas stations.

Have your students conduct research to learn more about Usonia. What do you think of Wright's reaction to International Style? Write a short paper with your response.

PROJECT EXTENSION

Hold a debate in which two teams present arguments supporting and opposing International Style and Wright's Usonian vision.

GLOSSARY

Cantilever: A cantilever is a bar or beam whose weight is supported at one end. An example of a cantilevered structure is a balcony. One way of demonstrating a cantilever is to stand with your arm extended, balancing a book on your forearm.

HOUSE FIVE: The Glass House—Farnsworth House, Plano, Illinois. 1946–51

Ludwig Mies van der Rohe (American, born Germany. 1886–1969)



IMAGE 20: Exterior view. October 1985. Photo: Jon Miller. © Hedrich Blessing



IMAGE 21: Interior view. October 1985. Photo: Jon Miller. © Hedrich Blessing

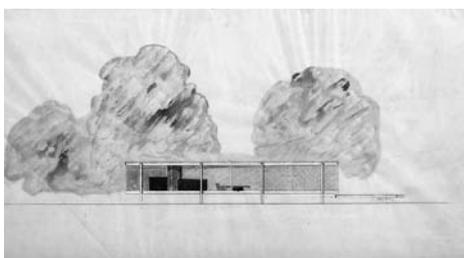


IMAGE 22: Elevation. 1945. Watercolor and graphite on tracing paper, 13 x 25" (33 x 63.5 cm). Drawing attributed to Edward Duckett. Later addition of watercolor: Mies van der Rohe. Mies van der Rohe Archive, The Museum of Modern Art, New York. Gift of the architect, 1966. © 2004 The Museum of Modern Art, New York

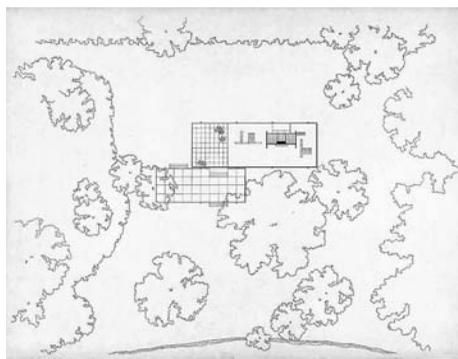


IMAGE 23: Plan. 1946. Ink on paper, 30 x 40" (76.2 x 101.6 cm). Mies van der Rohe Archive, The Museum of Modern Art, New York. Gift of the architect, 1966. © 2004 The Museum of Modern Art, New York



IMAGE 24: Model. 1985. Synthetic polymer paint, wood, metal, plastic, plexiglass, sand, paper, 30¼ x 60¾ x 42¼" (76.8 x 153.4 x 107.3 cm). Modelmakers: Paul Bonfilio, with Edith Randel and Lenon Kaplan. The Museum of Modern Art, New York. Purchase



IMAGE 25: Barcelona Chair. 1929. Stainless steel bars and leather, 31 x 29¾ x 30" (78.7 x 74.6 x 76.2 cm). The Museum of Modern Art, New York. Gift of Knoll International, Inc.

ABOUT THE FARNSWORTH HOUSE

The Farnsworth House was built between 1946 and 1951 on twenty acres of land adjacent to the Fox River in the Chicago suburb of Plano, Illinois. Named after Dr. Edith Farnsworth, the client and first owner, this house was unusual at the time because the exterior was made primarily of large sheets of glass and white *enameled* steel. Designed by the architect Ludwig Mies van der Rohe, the Farnsworth House was conceived as a one-story weekend home. Dr. Farnsworth commissioned Mies van der Rohe to design the Farnsworth House, her second home, after they were introduced by mutual friends. She left all of the decisions to the architect, allowing him to design the house as if it were intended for himself. Mies envisioned the interior as consisting mainly of a large living area and other smaller areas, with the kitchen, two bathrooms, and a fireplace positioned close to the center of the main living space. Since the house did not have an opaque exterior, the only way to create any privacy was to draw the curtains.

When construction was completed, Dr. Farnsworth and Mies became involved in a bitter public feud over the interior. Although Dr. Farnsworth was interested in using her existing furniture for the house, Mies insisted on decorating it with his own designs. When Dr. Farnsworth sold the house, the second owner furnished it exclusively with Mies furniture (see Image 21). One of the pieces was Mies's Barcelona Chair (see Image 25), originally designed for the German Pavilion at the 1929 International Exposition in Barcelona. At the time the chair was first introduced, it could not be mass-produced due to its elaborate parts and complex steel base.

The dispute between Mies and Dr. Farnsworth received much press coverage, in part because of the unusual appearance of the house, which attracted both positive and negative reactions. For example, a 1953 article in *House Beautiful* magazine presented the following view:

Does it work? The much touted all-glass cube of International Style architecture is perhaps the most unlivable type of home for man since he descended from the tree and entered a cave. You burn up in the summer and freeze in the winter, because nothing must interfere with the “pure” form of their rectangles—no overhanging roofs to shade you from the sun; the bare minimum of gadgets and possessions so as not to spoil the “clean” look; three or four pieces of furniture placed along arbitrary pre-ordained lines; room for only a few books and one painting at precise and permanent points; no children, no dogs, extremely meager kitchen facilities—nothing human that might disturb the architect's composition.⁹

Mies provided this explanation for the house's unusual design:

Nature, too, shall have its own life. We must beware not to disrupt it with the color of our house, and interior fittings. Yet we should attempt to bring nature, houses, and human beings together into a higher unity. If you view nature through the glass walls of the Farnsworth House, it gains a more profound significance than if viewed from the outside.¹⁰

DISCUSSION QUESTIONS

- Describe the house that you see in these pictures. What did you think when you first looked at it? How would you compare it to other houses you have seen in your neighborhood?
- Describe the rooms in these pictures. Now that you have seen photographs of the Farnsworth House, what do you think of it? What do you suppose it would be like to live here?

9. Elizabeth Gordon, “The Threat to the Next America.” *House Beautiful* (April 1953); repr. Friedman, *Women and the Making of the Modern House* (1998), 141.

10. Christian Norberg-Schulz, “A Talk with Mies van der Rohe.” *Baukunst und Werkform*, no. 11 (1958); repr. Fritz Neumeier, *The Artless Word: Mies van der Rohe on the Building Art*, trans. Mark Jarzombek (Cambridge: MIT Press, 1991), 235.

FOLLOW-UP ACTIVITY

Have your students write a short essay in response to the excerpt from *House Beautiful*. Ask them to consider the following questions:

- **In the context of Mies's statement about the Farnsworth House, do you think his design was successful? Why or why not?**
- **How do you think people would react to the Farnsworth House today if it had just been built? Do you suppose they would react as people did in 1951? Explain.**

ABOUT LUDWIG MIES VAN DER ROHE

Mies van der Rohe was born Ludwig Mies, in Aachen, Germany, in 1886. Aachen, located in the state of North Rhine-Westphalia (Nordrhein-Westfalen), close to the borders of Belgium, The Netherlands, and Luxembourg, is also known as Aix-la-Chapelle.

The youngest of five children, Mies worked in his father's stone-cutting shop until he was thirteen years old, gaining valuable experience that would later emerge in his work as an architect. He subsequently went to trade school for two years, and when he was fifteen he worked in an interior decorator's workshop. Three years later, Mies found a job working for a local architect. When he was nineteen, he moved to Berlin to work in the office of Peter Behrens, an architect who was well-known at the time for his designs of factories and houses. (Other promising architects, such as Le Corbusier, also came to work in Behrens's office around that time.) Mies earned his first commission designing a house for Alois Riehl, a philosophy professor at Friedrich-Wilhelm University, in Berlin.

From 1930–33, Mies was the director of the Bauhaus, an art, architecture, industrial design, and crafts school founded by Walter Gropius in 1917, and originally located in Weimar, Germany. The focus of the Bauhaus was to mass-produce artistic designs for household items, such as teapots, furniture, lighting fixtures, fabrics for wallcoverings, and jewelry. Mies's leadership of the Bauhaus coincided with Hitler's rise to power in the 1930s. Hitler assumed control of individual liberties as well as artistic, political, and cultural thought. Although Mies had relocated the Bauhaus to Berlin in an attempt to escape the increasingly unstable political atmosphere in Weimar, he was forced to close it down in 1933 due to pressure from the Nazis, who opposed modernist art and architecture. In the following years, Mies struggled to retain commissions for his design work. In 1938, as a refugee of Nazi Germany, he immigrated to the United States. Mies became director of the architecture department at the Armour Institute of Technology (now known as the Illinois Institute of Technology).

Mies was a prolific architect, designing homes, office buildings, banks, museums, and school buildings in the United States, Canada, Germany, the Czech Republic, and Spain. One of his best-known designs is the Seagram Building, a skyscraper built in the 1950s in midtown Manhattan. Scholars have attributed Mies's primary influences to the De Stijl movement and Frank Lloyd Wright. Mies's work was featured in a 1932 exhibition at The Museum of Modern Art called *Modern Architecture: International Exhibition*, which consequently increased the public's interest in modern architecture.

Mies van der Rohe died in Chicago, Illinois, in 1969.

RESEARCH PROJECTS

1. The Bauhaus

Conduct research on the Bauhaus movement. How would you define the movement, and what is its history? Who were some of the artists active in the movement, and what are some examples of their work? How did some of the main Bauhaus concepts surface in Mies's own designs? The political climate in Germany had a major impact on the fate of the

Bauhaus movement. How did the closing of the Bauhaus affect both Mies's career and the reception of modern European architecture in the United States?

2. Politics and the Impact on Artists

During the 1930s, Hitler rose to power in Germany. As a result, many artists and intellectuals, like Mies, sought asylum in other countries to escape censorship and the suppression of individual and political rights. Find out who some of these artists were, and how their lives and work were affected by political events in Germany at that time. Write a report that presents your research.

GLOSSARY

Bauhaus: The Bauhaus was a school created by Walter Gropius in 1917, which first opened in Weimar, Germany, and then relocated to Dessau and Berlin before the Nazis finally closed it down in 1933. The name Bauhaus makes reference to the German word *Bauhütten*, the homes for stonemasons during the High Middle Ages. The Bauhaus conducted its training through artists' workshops, where students gained practical and hands-on skills in art, craft, and architectural and industrial design.

Enamel: To treat a material in order to create a smooth and glossy surface. Enamel can also refer to a type of paint made from very fine pigments and resin that form a glossy surface.

HOUSE SIX: The Curved House—Endless House Project (unbuilt). 1950–60

Frederick Kiesler (American, born Romania, now Ukraine. 1890–1965)

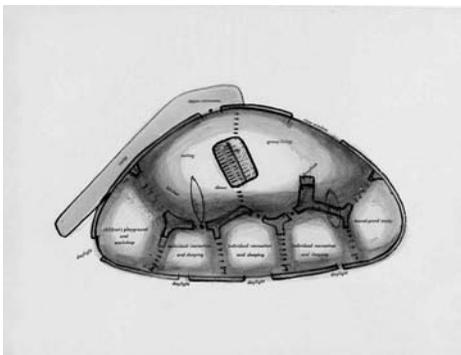


IMAGE 26: Plan. 1951. Ink on paper with color ink on polymer sheet overlay, 14 3/4 x 17 7/8" (37.5 x 45.5 cm). The Museum of Modern Art, New York. Purchase, 1966



IMAGE 27: Model for Endless House Project. 1960. Plaster, 20 x 11 1/2 x 6" (50.8 x 29.2 x 15.2 cm). Photo courtesy the Architecture and Design Study Center, The Museum of Modern Art, New York



IMAGE 28: Model for Endless House Project. 1960. Plaster, 20 x 11 1/2 x 6" (50.8 x 29.2 x 15.2 cm). Photo courtesy the Architecture and Design Study Center, The Museum of Modern Art, New York

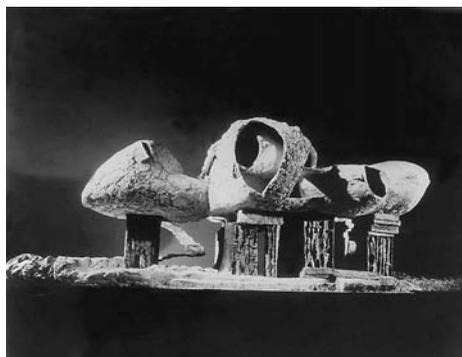


IMAGE 29: Model for Endless House Project. 1960. Plaster, 20 x 11 1/2 x 6" (50.8 x 29.2 x 15.2 cm). Photo courtesy the Architecture and Design Study Center, The Museum of Modern Art, New York



IMAGE 30: Model for Endless House Project. 1960. Plaster, 20 x 11 1/2 x 6" (50.8 x 29.2 x 15.2 cm). Photo courtesy the Architecture and Design Study Center, The Museum of Modern Art, New York

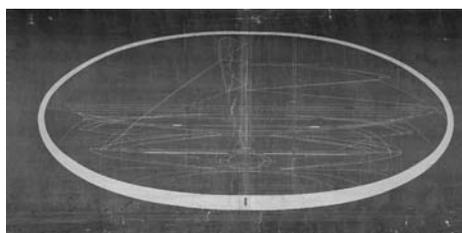


IMAGE 31: Endless Theater Project. 1924 (unbuilt). Section, diazotype, 46 3/4 x 8' 5" (118.7 x 256.5 cm). The Museum of Modern Art, New York. Gift of the architect

ABOUT THE ENDLESS HOUSE PROJECT

Frederick Kiesler, the architect of the Endless House Project, was fascinated by the curved form of the human body, an interest that contrasted sharply with the streamlined aesthetic of the International Style architects, such as Le Corbusier (see House Three) and Mies van der Rohe (see House 5). A lifelong obsession for Kiesler that began in the 1920s, the Endless House was never built. In 1961, he turned down an opportunity to finally build the Endless House in Florida because the client refused to make compromises. In reference to his ongoing commitment to the project, Kiesler once claimed that “everyone has one basic idea, and he will always come back to it.”¹¹

Kiesler’s models and drawings provide a clear sense of what the Endless House would look like if it were built. The house would be elevated on columns with a ramp leading to the entrance. Reinforced concrete would have been used as the primary building material, as it could be manipulated to accommodate the house’s roundness and semicircular windows and skylights. Kiesler chose organic materials for the inside of the house, such as floors made from pebbles, sand, wood, grass, and tile; he also envisioned frescoes and sculptures for the interior, bathing pools instead of bathtubs, and adjustable dividers between each room.

DISCUSSION QUESTIONS

- Describe the house that you see in Images 26 through 30. Think of five words you would use to describe the Endless House Project. What made you select those words?
- How would you compare the Endless House Project to other homes you have seen in this guide and in your neighborhood?

FOLLOW-UP ACTIVITIES

Building the Endless House

Materials needed for this activity: a notebook for each student, pencils, and pens (or colored paper, scissors, and glue for collage work), large sheets of white paper for each group, and photocopies of selected photos, plans, and drawings of the Endless House Project.

Students can work independently or in groups to develop their own vision for completing the Endless House.

Have students consider the following:

- A client has asked you to complete the design for the Endless House and build it. Using your notebook to record your ideas, prepare a drawing of the inside and outside of the house.
- Suppose you were to finish designing and building the Endless House. Would you add other features to it? Why?
- Would you use the same building materials as Kiesler envisioned, or would you change them?
- Where would you build the Endless House? Describe the type of environment you would choose.

11. Lisa Phillips, in *Frederick Kiesler* (New York: Whitney Museum of American Art, 1989), 158.

PROJECT EXTENSIONS

1. Your Vision for Kiesler's Endless Theater Project (Image 31)

Have your students design a set for the production of a play that they have read or performed in school. As part of their work, students can include research on Kiesler's vision for his Endless Theater.

QUESTIONS FOR CONSIDERATION

- How would you compare the processes of designing a home and a theater? Do you notice any similarities or differences between the processes?
- What kinds of materials did you use for each of your designs? Why?

2. Everyone Has One Basic Idea

Materials needed for this activity: a notebook for each student, pencils, and pens (or colored paper, scissors, and glue for collage work).

Have your students develop a design idea around Kiesler's quote, "Everyone has one basic idea, and he will always come back to it."

QUESTIONS FOR CONSIDERATION

- What do you suppose Kiesler meant by his statement?
- If you could come up with one good design idea, what would it be?

Students can use any method of expression they prefer—they can record their ideas in writing or in drawings/diagrams.

ABOUT FREDERICK KIESLER

An architect, set designer, and artist, Frederick Kiesler was born in 1890 in Cernauti (now Chernovtsy), Romania, located in the modern-day region of southwest Ukraine. When he was eighteen years old, Kiesler moved to Vienna to study painting and printmaking. Early on in his career, he focused on painting and set design. During the 1920s Kiesler moved to Berlin, where he designed a set for *Emperor Jones*, by the American playwright Eugene O'Neill. While in Berlin Kiesler joined the De Stijl group, of which the architect Gerrit Rietveld was also a member (see House Two).

In 1926, Kiesler relocated permanently to New York. He founded the International Theatre Arts Institute in Brooklyn, where he taught classes on theater design. He began his career as an architect, incorporating his own architectural firm called Planners Institute in 1934. Kiesler also designed his own furniture, and he created store windows for the department store Saks Fifth Avenue.

Kiesler spent thirteen years as director of scenic design at the Juilliard School, designing sets for operas such as Mozart's *Magic Flute* and Strauss's *Ariadne auf Naxos*. In 1937 he also became an associate professor at Columbia University School of Architecture. Kiesler's architectural designs include private homes for clients in New York City, Connecticut, and Florida, as well as the Film Guild Cinema (now closed, which opened in 1929 on Eighth Street) and the World House Gallery (located in the Carlyle Hotel), both in New York City.

Kiesler died in New York City, in 1965.

HOUSE SEVEN: One-of-a-Kind Homes in the City—Highrise of Homes Project (unbuilt). 1981

James Wines (SITE) (American, born 1932)



IMAGE 32: Exterior perspective. 1981. Ink and charcoal on paper, 22 x 24" (55.9 x 61 cm). The Museum of Modern Art, New York. Best Products Company Inc. Architecture Fund, 1981

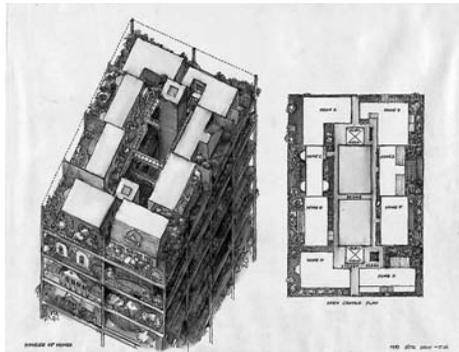


IMAGE 33: Aerial perspective and plan. 1981. Ink and sienna wash on paper, 11 x 13¼" (27.9 x 34.9 cm). The Museum of Modern Art, New York. Best Products Company Inc. Architecture Fund, 1981

ABOUT THE HIGHRISE OF HOMES PROJECT

Conceived in the 1980s by the architect James Wines and his design firm SITE (Sculpture in the Environment), the Highrise of Homes Project is the only design in this guide that includes the potential use of an existing building as part of its structure. SITE's objective was to develop a design that represented an alternative to the generic, mass-produced urban high-rise apartment building. The residential complex of ten to fifteen stories high could either be newly built or use the steel and concrete framework of existing factory buildings, and, according to Wines, could be built in either a low- or high-income neighborhood. Each level of this complex was to consist of plots of land with streets, upon which individual homes would be custom-built based on the preferences of the owner. The houses were to be built around a *core* in a rectangular or U-shaped configuration, to ensure that all of the plots received ample natural light.

The Highrise of Homes was to combine the conveniences of urban living with a sense of individuality not typically found in a large city. No two homes were to be alike. On the ground floor of the complex, residents would find a grocery store, shops, a garden, office spaces, a parking lot, and entertainment facilities. Residents would access their homes on different levels via elevator.

One potential site for the Highrise of Homes was Battery Park City, a waterfront residential community adjacent to the site of the World Trade Center, in New York City. This design was never built, however, because the construction cost of each housing unit was too high. In addition, each home would have demanded separate designs and different materials, requiring an unusually large amount of time to complete the project. Most construction projects in large cities like New York are of the more cost-efficient variety, such as prefabricated housing or apartment units, and James Wines and SITE attracted considerable attention in the architecture community for their innovative, utopian vision.

DISCUSSION QUESTIONS

- Now that you have some information about the Highrise of Homes Project, let us look at a couple of the design drawings. What do you see in each of these drawings? What kind of information do these drawings provide about this project?

FOLLOW-UP ACTIVITY

City Planner for the Highrise of Homes

Materials needed for this activity: a notebook for each student, pencils, and pens (or colored paper, scissors, and glue for collage work), large sheets of white paper for each group, and photocopies of design drawings for the Highrise of Homes Project.

Working in groups, students should develop their own designs for the Highrise of Homes. Print the two images of design drawings and make photocopies for each of your students. Divide the students into groups of four. The groups can delegate a task to each student: for example, one person should record all ideas, one should present his or her group's work to the class, etc.

Each group represents the *city planners* and the architects for the project. The groups should decide where would be the best location to build the Highrise of Homes, develop a design proposal for the building, and present it to the class. Then break up the groups and have them form one large group, choose one of the designs, and prepare a drawing based on that design. Each original group's proposal should address the following questions:

Your house:

- As a group, how did you select this design?
- Describe the features of this house. What types of materials would you use, and why?
- Who do you think might want to live here?

The site for your Highrise of Homes:

- Describe the location you chose. Is it a large city, a suburb, or a small town? What would be the ideal neighborhood for your project? Will you build a new structure or use an existing factory? Why?
- How large will your Highrise of Homes be? How many stories will it be? How many homes will you place on each "floor?"
- Describe the location's climate? For instance, have you placed the structure in a coastal area or near the mountains? Why? What sorts of potential advantages and disadvantages do you think your choice of location and climate might have for this type of housing?
- What types of services and shops would you include on the ground floor? Explain your choices.
- Describe what it might be like to live in your Highrise of Homes.
- If you were to give your design a name other than the Highrise of Homes, what would it be?

DISCUSSION QUESTIONS

- Think about each group's design. What sorts of similarities and differences do you notice?
- Describe the work process of your group, such as the brainstorming and planning that you did. What kinds of ideas did each group member contribute? Did you tend to agree or disagree? How did you incorporate everyone's ideas? What issues were easiest to work out as a group?

ABOUT JAMES WINES

Born in 1932 in Oak Park, Illinois, James Wines founded SITE (Sculpture in the Environment) in 1970, an architectural and environmental design firm. In addition to the Highrise of Homes Project, Wines and his firm SITE have produced innovative designs for museums, schools, showrooms, and private homes. Projects include a marine science center called Aquatorium in Chatanooga, Tennessee, and a pavilion for the 1986 Worlds Fair in Vancouver, Canada. Wines once described his firm's approach to architecture in the following way: "Contrary to using art as a decorative or applied accessory to buildings, my work is an endeavor to eliminate the distinction which has always separated art and architecture."¹²

Wines studied sculpture at Syracuse University, and has also taught architecture in New York City at the New School University, School of Visual Arts, and New York University.

RESEARCH PROJECT

Highrise Housing

Research examples of highrise housing by other architects, such as Le Corbusier's L'Unité d'habitation (French for "united habitat") and Fort L'Empereur (French for "the Emperor Fort"). Compare Wines's Highrise of Homes Project to another architect's design. What were his or her goals for the design? Then explore your own neighborhood. Do you see examples of highrise housing where you live?

GLOSSARY

Core: The area in a multistory building that contains utilities such as staircases, elevators, etc.

City planner: An individual who helps guide and shape the future development of a community. A *city planner* considers environmental and social issues, and what kinds of resources are needed to improve the quality of life for the community residents, particularly concerning what types of new building projects may be necessary.

12. *Contemporary Architects*, Muriel Emanuel, ed. (New York: St. James Press, 1994), 1052.

FOR FURTHER CONSIDERATION

DISCUSSION QUESTIONS

The following questions are designed to help your students reflect on some of the main ideas presented in this guide. You may want to use these as part of a class discussion or written homework assignment.

- **Which design do you like best? Why?**
- **Pick two of the homes in this guide and compare them. What kinds of similarities and differences do you notice in the designs?**
- **Conduct a walking tour of your neighborhood. Can you find examples of houses or buildings that incorporate some of the styles or features of homes in this guide? Explain your findings.**

RESEARCH PROJECT

Ask your students to make a list of questions that they still have about any of the homes featured in this guide, or about residential architecture in general. Have them take turns to write questions on the board and then organize the questions into categories. For instance:

- **Questions about the architect's life and work.**
- **Historical events during the architect's lifetime and how these factors may have played a role in his or her career and work.**
- **Building materials and technology.**
- **Questions about the history of a particular home, its neighborhood, or its original homeowners.**
- **Economic factors, such as the cost of materials, the cost of construction, etc.**

WRITING PROJECT

From the Critic's Perspective

Ask your students to assume the role of a critic and to write an article about one of the homes in this guide. You can have your students read an architectural review from the *New York Times* (for an online copy, see www.nytimes.com). As part of their critique, students can consider their own opinions about the house they have selected.

QUESTIONS FOR CONSIDERATION

- **What do you like best and least about this home? As part of your response, comment on the home's design, style, materials, features, and the relationship between the home and its environment.**
- **Include a comparison between this home and another one from this guide. For instance, you could write about the Schröder House and the Villa Savoye, or the Villa Savoye and Fallingwater.**
- **Compare this home to another design by the same architect. What kinds of similarities and differences did you find? Did the architect use similar types of materials, or not? How did the clients and the public respond to each design, and why? If you selected a design that was built, what impact did the completed project have on the surrounding community? Were there other effects (environmental, political, etc.)?**

CLASS TRIPS

Contact your local branch of the American Institute of Architects (www.aia.org) or an historic preservation group in your area, such as the National Trust for Historic Preservation (www.nationaltrust.org/index). Ask if they can recommend a site for a field trip to a public home in your area. If there are no homes open to the public at that time, ask if there are any homes that can be viewed from the outside.

Visit the office of a local architect. Ask if your students may view drawings, models, and photographs of one of the firm's residential projects, and be sure to make time for students to ask questions.

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D. MUSEUMS, ORGANIZATIONS, AND ONLINE RESOURCES

Berenice Abbott's *Changing New York* (full text and images):
www.mcny.org/Exhibitions/abbott/abbott.htm

American Institute of Architects
www.aia.org

Architectural Record
archrecord.construction.com/

Cooper-Hewitt, National Design Museum
<http://ndm.si.edu>

The Grove Dictionary of Art Online (requires subscription)
www.groveart.com

Images and information on historical buildings and architects
www.greatbuildings.com

Learning by Design
A Program of the New York Foundation for Architecture
The Center for Architecture
534 LaGuardia Place
New York, NY 10012
www.nyfarchitecture.org

The Museum of the City of New York
www.mcny.org

The Museum of Modern Art
www.moma.org

MoMA teensite:

www.moma.org/redstudio

National Building Museum

www.nbm.org

National Trust for Historic Preservation

www.nationaltrust.org/index.html

Online library (requires subscription)

www.questia.com

Society of Architectural Historians

www.sah.org

United Nations World Heritage Sites

<http://whc.unesco.org/nwhc/pages/home/pages/homepage.htm>

E. FOR MORE INFORMATION ON THE HOUSES AND ARCHITECTS IN THIS GUIDE....

Fondation Le Corbusier (the Le Corbusier Foundation)

www.fondationlecorbusier.asso.fr (in French and English)

Links to online resources on Le Corbusier

www.lecorbusier.com

Farnsworth House

www.farnsworthhousefriends.org

Edith Farnsworth's memoirs

The Newberry Library, Chicago, Illinois

www.newberry.org

Frederick Kiesler/Frederick Kiesler Center Vienna

www.kiesler.org

Mies van der Rohe (online exhibitions)

Mies in Berlin: www.moma.org/exhibitions/2001/mies/index.html

Mies in America: www.whitney.org/mies

Schröder House, Utrecht, The Netherlands
www.centraalmuseum.nl

Villa Savoye
www.monum.fr (information on a number of historical sites throughout France, in French and English)

James Wines/SITE
<http://siteenvirodesign.com>

Frank Lloyd Wright: Fallingwater (includes visitor information and resources for teachers)
www.wpconline.org/fallingwaterhome.htm

Frank Lloyd Wright Foundation
www.franklloydwright.org

Frank Lloyd Wright (PBS site)
www.pbs.org/flw

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