

THE WRIGHT 3 BOOK CLUB ACTIVITIES



Authored by Monona Terrace Community and Convention Center Education Staff

Chapters 1-5

Petra - Writer

In this book, you are introduced to the three central characters- Petra, Calder, and Tommy. Write a short piece- a couple of paragraphs in length- about what makes each character unique. How do they see the world? What are their talents? What inspires them? Which character do you relate to most?

Tommy - Finder

You can begin to “read” buildings when you take a closer look at architectural language. Five elements of this language are:

Shapes (or Forms), Scale, Colors, Materials, and Texture

For this exercise, walk around your school building and answer the following questions.

1. What are the predominant **shapes** of the school’s design? Where do you find them?
2. What is the **scale** of the architecture? In other words, what is the relationship between the size of the building and the people who use it?
 - a. Discuss whether windows, doors, lockers, and furniture are sized for kids, adults, or both. Is there anything in the school that is not proportioned for students, and if so, what is it?
 - b. Do the spaces make you feel big or small?
 - c. How does this building compare in size to the buildings surrounding it?
3. What **colors** have been chosen for the exterior and interior of the building? Are they warm colors (yellow, orange, red) or cool colors (green, blue, purple)? Focusing on your classroom now... what are the colors of your classroom walls and why were they chosen? Do you think the colors were intended to produce a certain feeling in the rooms?

Calder - Mathematician

(These activities come from the website

http://www.scholastic.com/blueballiett/games/pentominoes_game.htm

and can be done online instead of with paper cut-outs.)

Print a set of pentominoes from the website. Make a copy for each student so that each has their own set.

Discuss

What defines a pentomino? *Each has five squares. The squares are all the same size. One side of one square fits exactly against one side of another square.*

Identify the letters represented.

Give them the opportunity to familiarize themselves with pentominoes in the following exercises:

Have students work in pairs. Using a 7 x 7 grid sheet, students will alternate placing a pentomino piece on the grid. The pieces cannot extend beyond the grid or overlap. The last player able to put a piece on the board wins.

Additional Challenge

Students can also try covering a 5 x 12 or 4 x 15 grid. They will use all 12 pentominoes for these rectangles. They can record by tracing the pentominoes on the grid sheets to show their work.

Chapters 6-10

Calder - Mathematician

Architects and designers can be inspired by all kinds of things!

On page 51, Calder is inspired by his pentominoes to design classroom furniture and playground equipment using pentomino shapes.

Architect Frank Gehry says that his designs have been inspired by the form and texture of a fish. This is connected to childhood memories of his grandmother's purchase of a carp at the fish market. She took the fish home in a paper container filled with water and put it in a bathtub, where young Frank would watch it swim. (For discussion purposes, you can access images of his Frederick R. Weisman Art Museum in Minneapolis by going to Google Images on the internet and searching "Weisman Art Museum.")

When Frank Lloyd Wright was a boy, he played with Froebel blocks. These German toys inspired him to see objects in a different way- as arrangements of geometry and shapes. Go to the (4) Liberty magazine covers designed by Wright in the Supporting Materials at the end of this document. The title of each design gives away his inspiration and the "real thing" that he abstracted. Discuss the concept of abstraction as simplification of form.

Have students try their hand at abstract design. Choose an image of a natural landscape from a magazine and instruct students to redraw the image with only these shapes: curve, circle, triangle, rectangle, and square. If you want to make the challenge more difficult, ask students to add a human figure "to scale" in the design, so that the figure is proportionate to the scale of the landscape.

Tommy - Finder

"Your job is to figure out whether you think this building is a piece of art."

You will do the same exercise as Ms. Hussey's class in Chapter 10. Gather images of a variety of buildings from the Internet using Google Images.

Try these or find others on your own:

1. Frederick R. Weisman Art Museum, Minneapolis, MN
Architect: Frank Gehry
2. Washington National Cathedral, Washington, D.C.
Architect: George Frederick Bodley
3. Edith Farnsworth House, Plano, IL
Architect: Ludwig Mies van der Rohe
4. Einstein Tower, near Potsdam, Germany
Architect: Erich Mendelsohn
5. Habitat '67 Montreal, Canada
Architect: Moshe Safdie
6. Chrysler Building, New York, NY
Architect: William Van Allen
7. Casa Batllo Barcelona, Spain
Architect: Antonio Gaudi

As a group, develop your own set of criteria for determining when buildings are art. Using these criteria, identify buildings that qualify as art and those that do not. You may want to use the 5 elements of architectural language- shapes, scale, color, materials, and texture - to guide discussion.

Petra - Writer

You can begin to read buildings when you take a closer look at architectural language. Five elements of this language are:

Shapes (or Forms), Materials, Texture, Scale and Colors

For this exercise, the focus will be on the materials and texture of your school building. Record your observations in answer to the following questions.

Exterior: What materials is the building made of on the outside?

Interior: What materials is your classroom made of on the inside?

Go to the "Materials Survey" in the Supporting Materials at the end of this document.

List your school's materials in the column on the left. Now have each student place an x in the boxes of the qualities that apply to that material. Compare answers.

Remember to touch the materials! Do a rubbing of several different textures around the school. Strong paper and pencils or crayons do a nice job. On the rubbing, label the material and its location.

Chapters 11-15

Tommy - FINDER

"Art should be interesting every time you look at it."

Ask an art teacher for a good resource of art images, or visit <http://www.getty.edu/art> for online images. Select a painting for the focus of this activity. (We like artists Rousseau or Seurat for this activity.)

First, as a group, look at the artwork for one minute. Then cover the image and have students record what they remember. Write down answers to the following:

How would you describe the people?

What was going on?

What colors are used?

What is the mood the artist is trying to convey?

For the second part of the exercise, use the same image, or, if you prefer, have students work in pairs with a painting of their choice. Record one new observation per day. Review your findings along the way. Do you like it more or less?

Calder - Mathematician

If students do not have pentominoes yet, go to the website

http://www.scholastic.com/blueballiett/games/pentominoes_game.htm

to print a set. Make a copy for each student so that each has his/her own set.

Discuss the concepts of symmetry- both line and rotational.

Which have line symmetry? (There are six.) Find out by folding the pentomino in half and comparing the two parts.

Which have rotational symmetry? (There are three.) Find out by rotating the pentomino 180 degrees.

Now, create a symmetrical stained glass design as Frank Lloyd Wright did for the Robie House. Use the grid sheet from the Scholastic pentomino set, or another grid if you prefer. Draw a vertical dotted line through the center. Make copies for the students. Have them line up a pentomino against the center and then "flip" it over the line to create a mirror image. Continue with several others to create a glass design. Finish by adding color with markers or crayons.

Petra - Writer

In this reading, you're introduced to Fibonacci numbers. What are they and what is the sequence? Create a six line Fibonacci poem about The Wright 3 story that uses the progression 1-1-2-3-5-8.

Here's an example of Fib poetry:

The
more
you do
the quicker
the poems will come.
Before you know it three are done.

Chapters 16-20

Tommy - Finder

Author Blue Balliett uses a number of literary devices to describe the Robie House, and particularly its windows. The excerpts below show a range of descriptions from various characters.

Ask students to:

1. Identify which excerpts are examples of similes, metaphors, personification, and imagery.
2. Write their own about the architecture of the school or another building.

To guide discussion, ask what other real object(s) students are reminded of when they look at your building? Use the 5 elements of architectural language - shapes, materials, texture, scale and color - to support your answer.

"...As Tommy walked slowly by, they seemed to wink and twinkle at him." — pages 26-27

"This morning the windows were shimmery, almost like the tail feathers on a peacock..." — Petra, pages 78-79

"What would it be like to live in a house like this? Bright and open, yes, but she thought she'd feel like a snail without its shell." — Petra, page 79

"It was almost as if the windows were a tease, saying, Here we all are, but what can you see?" — Petra, page 79

"A symphony, that's what the place is like- a complex Bach symphony that sharpens your mind even if you can't comprehend every strand of harmony." — Mrs. Sharpe, page 149

"Black and white triangles and parallelograms spanned the windows on all sides, and light from the street threw a crosshatch of shadow across the floor, as if a net had been dropped neatly underfoot." — Tommy, page 272

Calder - Mathematician

This exercise familiarizes students with looking at floor plans. Go to the Monona Terrace floorplans in the Supporting Materials at the end of this document.

Bear in mind that most of the labeled spaces are "rentable" convention center spaces used by our clients, with the exceptions, of course, of stairs, elevators, escalators, loading docks, receiving and restrooms. (Yes, even our rooftop is rentable during the warm months!)

1. Which rentable rooms are the smallest? There are two that look alike.
2. Which large rooms can be divided into smaller rooms? What symbol indicates this?
3. A client is planning a party and wants an indoor room with a view of the lake. Which spaces would you offer them that provide lakeside views?
4. Which level has the least amount of rentable space?
5. A client is holding a trade show. Which space would you recommend that can accommodate truck loading and unloading?
6. What floor must you be on to take the skywalk to the Hilton hotel?
7. List as many spaces as you can that have curved walls and corners instead of right angles.

Petra - Writer

Write a short piece—a couple of paragraphs in length—explaining the role of each of the supporting characters- Mr. Dare, Mrs. Sharpe, and Ms. Hussey. What do they contribute to the plot? How would the story be different without them? Are they important?

Chapters 21-25

Tommy - Finder

In the opening pages of the book, you'll find an illustrated map of The Wright 3's neighborhood. Discuss the aerial view and its correlation to the "birds-eye view" one gets from a floor plan.

As a group, create your own map of the area surrounding your school. The emphasis is not on precise scale, but rather on identifying landmarks and important places.

First, define the area you will represent on your map. If your school doesn't sit on a traditional grid block, choose a surrounding area that will include different types of buildings and usage.

Discuss with students the important buildings and places to represent on the map- the "landmarks." Include historic places, favorite restaurants or shopping, popular meeting spots, natural landmarks, perhaps a water tower. Be selective- you will not have room to include everything.

Include all of the following:

- a legend of symbols and what each represents, i.e., houses, trees, transportation, etc.
- directional symbol indicating north
- street names

You may also want to include:

- heavily used paths (by bus? by students who walk to school?)
- "nodes"- areas where people gather, important intersections
- any designated residential, shopping, industrial districts that exist in the area

Calder - Mathematician

Materials you'll need for this challenge:

straws

3 feet of masking tape

a ruler

A **cantilever** is a structure that is supported at one end and sticks out way beyond its base. Cantilevers were used frequently by Frank Lloyd Wright in his Prairie style residences. They contributed to the long, horizontal appearance of the building that reflected the flat landscape of the Midwestern prairie.

In the Robie House, the rooflines are great examples of cantilevers. In Wright's Fallingwater home, the balconies are cantilevered, projecting people out into the natural surroundings. Look for everyday examples of cantilevers in the classroom and identify a few.

A quick and easy demonstration of a cantilever: Hang a heavy backpack from one extended arm, first from near the shoulder, and then closer to the wrist. In which case is it more difficult to hold up the bag? Cantilevers in buildings must be extremely strong and are often reinforced by steel.

See how far you can build out your own straw cantilever:

1. Use a desktop as your point of support.
2. Using only the 3 feet of masking tape but as many straws as you like, build a cantilever out from the desk.
3. Your construction may not “droop” lower than 22 inches off the floor.
4. Hang weights at various points on the straws to test the strength of your cantilever.

Petra - Writer

“Tommy, examining it also, wondered if it was okay to keep a treasure like this that had been found on a piece of private property.” (pg. 84)

What do you think? Write a short persuasive piece- several paragraphs in length- about whether Tommy should, or should not, keep the fish, and why. Is it more important for him to save the Robie House or use the fish to get a home of his own?

Chapters 26-30

These activities are designed around an “architecture study site” of your choosing. This could be your school building or another in your neighborhood. It does not have to be a community ‘landmark’ or architecturally significant building, but it could be!

Petra - Writer

Since Petra and others in the book believe the house talks to them, use speech balloons to communicate what you think this building would say if it could talk. In other words, what mood does it convey to you? Is it friendly or unwelcoming to visitors? Does it fit in with its neighboring buildings or keep its distance? Use the 5 elements of architectural language- shape, scale, color, materials, and texture - to support your answer.

Tommy - Finder

1) Go to the “Investigate a Building” worksheet in the Supporting Materials at the end of this document. Have students individually complete this sheet.

2) Ask students to critique the building according to Frank Lloyd Wright’s design principles. To do so, they should answer the following questions.

Does the building appear to be in harmony with its site? Do shapes or materials reflect the natural or urban environment of which it is a part? Explain your answer.

- Does the building function well for its intended purpose (as a home, office, etc)? If so, why? If not, how would you improve the architecture to make it more user-friendly?
- Do ceiling heights change and provide feelings of shelter as well as openness?
- Can people enjoy views of the outside while inside? Is there a sense of “the outside coming in”?

Calder - Mathematician

Go to this source for graph paper: <http://incompetech.com/graphpaper/> Print square graph paper and indicate the size of the square as .25 inches.

Using a 1/4”= 1 ft scale, create a scale floor plan of one room of the study site. Measure walls, furnishings and room openings like doors and windows. Use floor plan symbols (find them on <http://www.the-house-plans-guide.com/blueprint-symbols.html>). In addition, indicate on the plan the area and perimeter of the space.

Additional Activity

Invite an expert to join you on your tour. The expert may be the architect, an historian, or a user of the building. As a group, develop a set of questions to ask your guest. After the presentation, write a paragraph about how your understanding of the building changed and increased after listening to the expert.

Chapters 31-34

Calder - Mathematician

Go to the Floor Plan worksheet in the Supporting Materials at the end of this document and complete the activity.

Petra - Writer

If you completed the Calder activity, try this:

Write and send a short story, several paragraphs, that takes place in the building you designed. Use the clients as the main characters. The story should include a description of the house and the clients' feelings about their new home.

If you don't complete the Calder activity, follow these instructions:

Write and send a short story, several paragraphs, in the voice of Fred "Sunny" Robie, Jr., the young boy who lived in the Robie house with his family. Your story takes place in the Robie House playroom on Level 1 and the adjacent outdoor play area. Include a description of the house and Sunny's feelings about his playroom.

Note: It is difficult to find images of the playroom in books or on the Internet. Students can locate it on the Robie House Floor Plans sheet in the Supporting Materials at the end of this document, and should assume that features of other parts of the home, i.e. stained glass, open floor plan, apply to the playroom. Some imagination will be required!

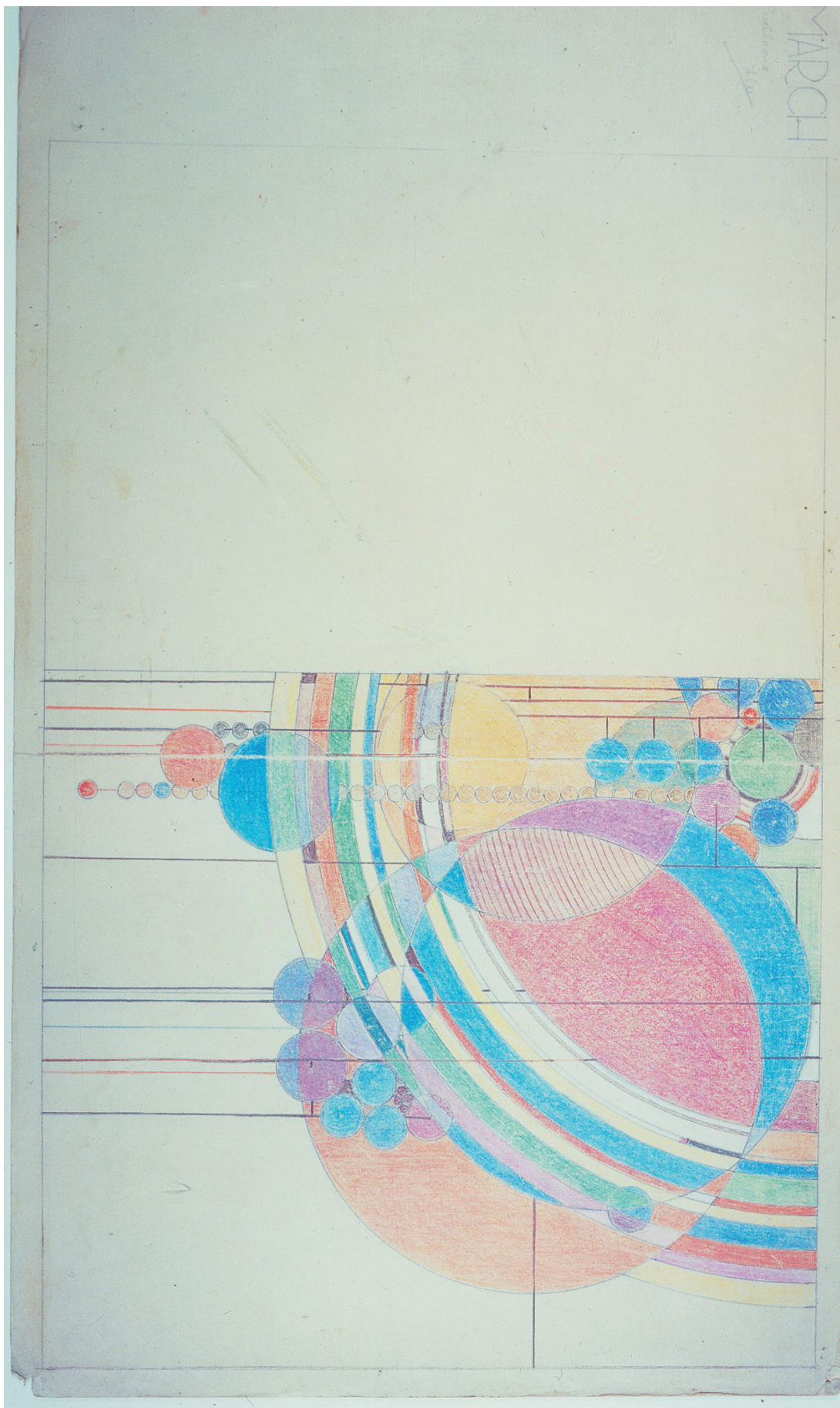
Tommy - Finder

Trace the steps of the Wright 3 when they investigate the Robie House on their own in Chapter 29.

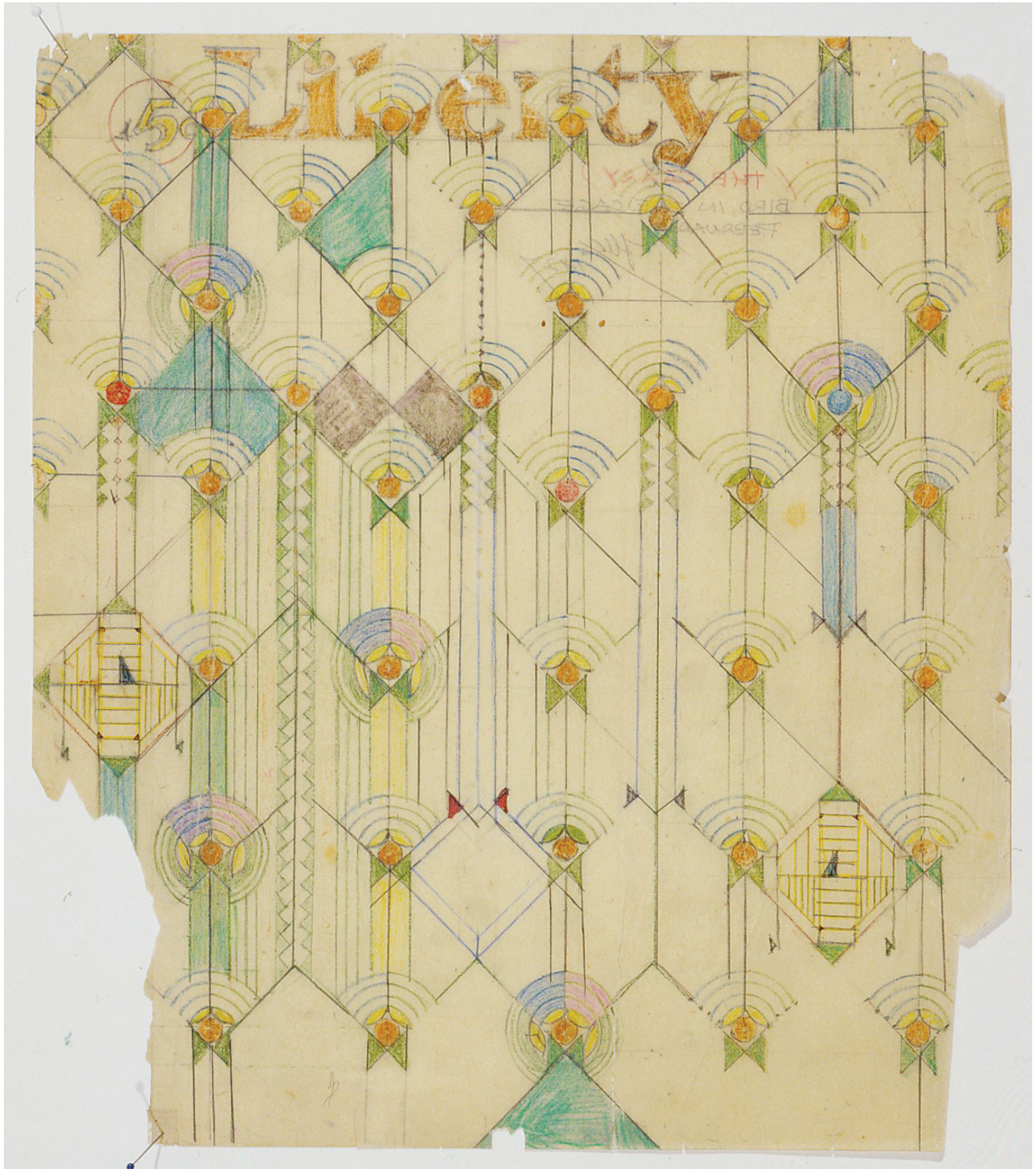
Begin by going to Robie House Floor Plans and printing a copy for each student.

Ask students to identify these locations on the floor plans with the corresponding number:

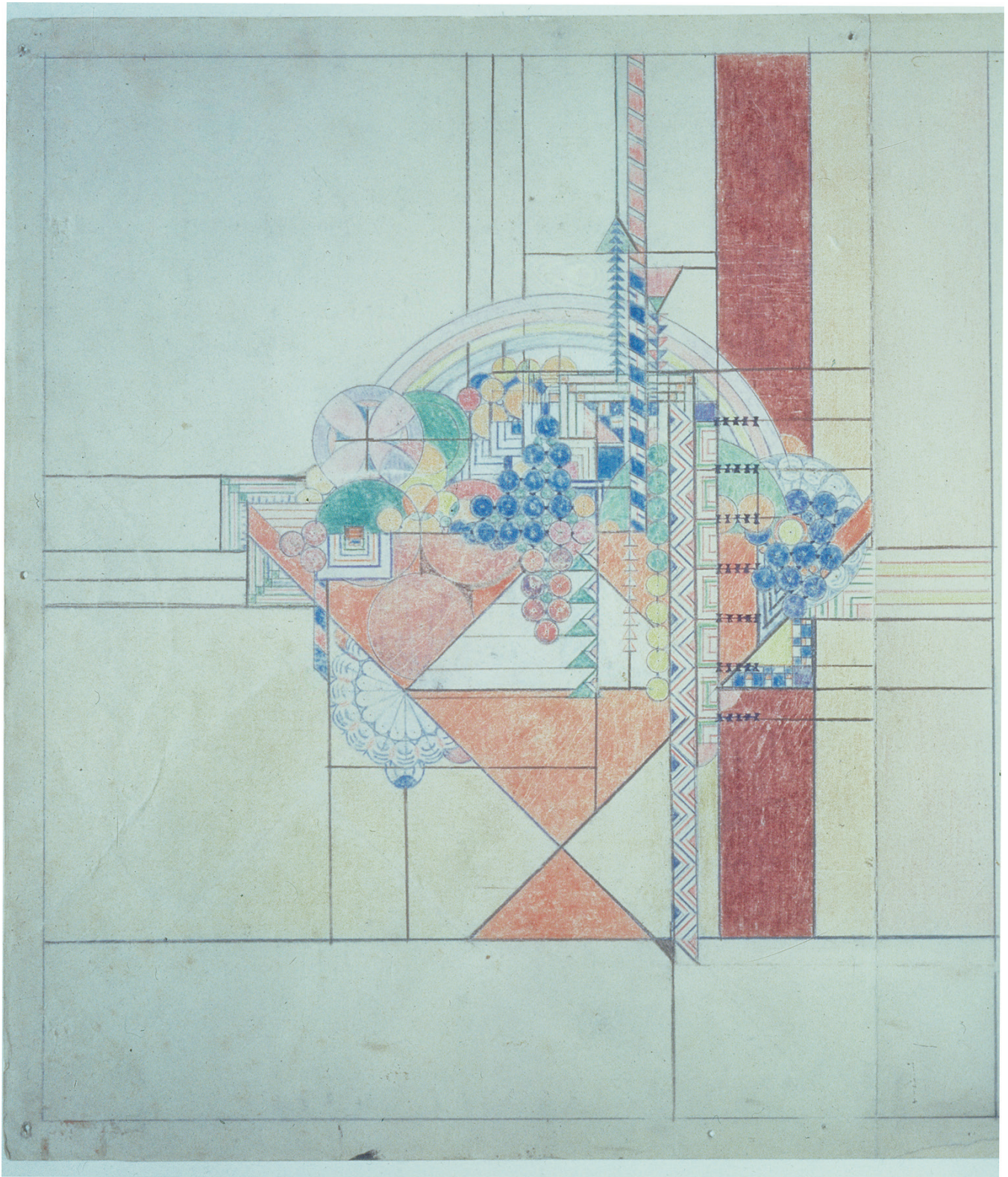
1. Where Tommy enters the house (page 269) (indicate with "1")
2. The pantry (page 278)
3. One "scary corner" (page 279) "connected the kitchen passageway to the back hall"
4. Another "scary corner" (page 279) connected "the hall to the third-floor stairwell"
5. Bedroom where the Wright 3 are caught (page 280)
6. "Roof above the living room" where they are cornered by Thin Head and Black Glasses (page



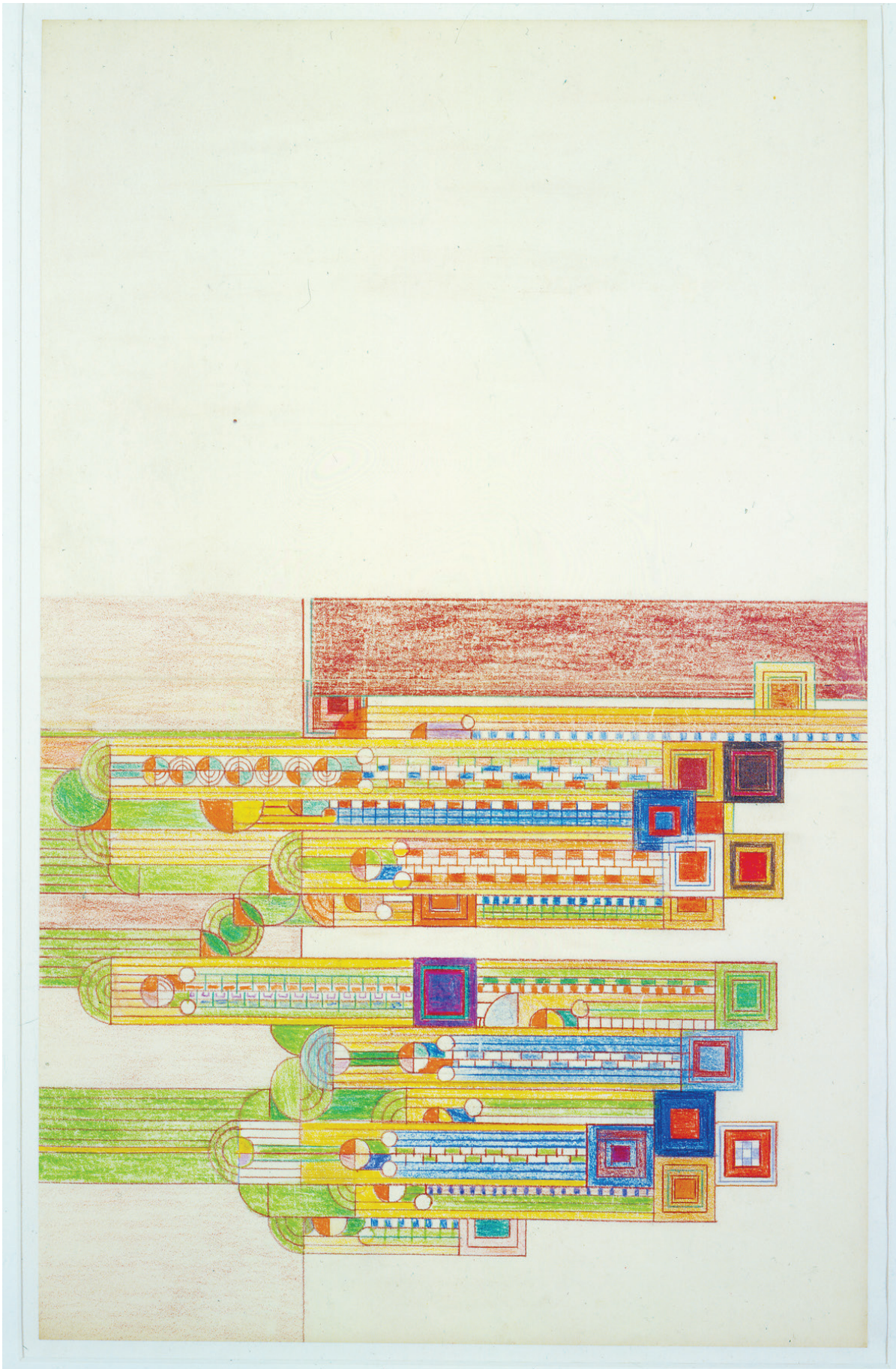
Liberty Magazine Cover: March Balloons



Liberty Magazine Cover: April Showers



Liberty Magazine Cover: May Basket



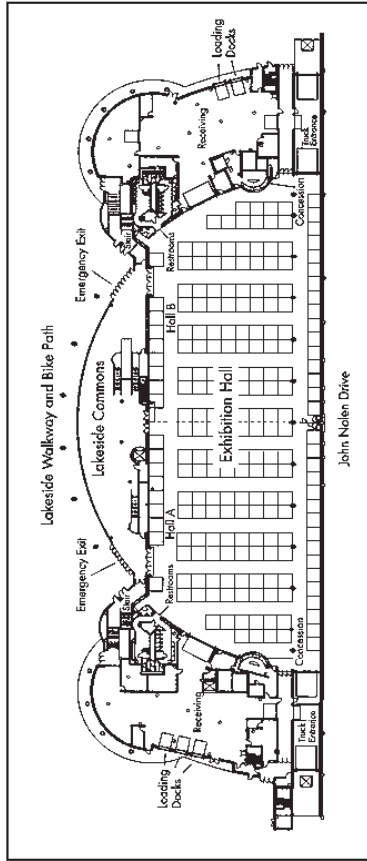
Liberty Magazine Cover: Saguaro Forms and Cactus Flowers

MONONA TERRACE COMMUNITY AND CONVENTION CENTER

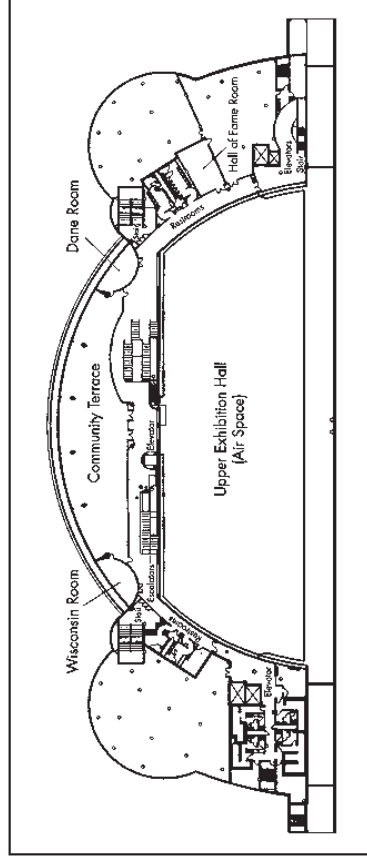


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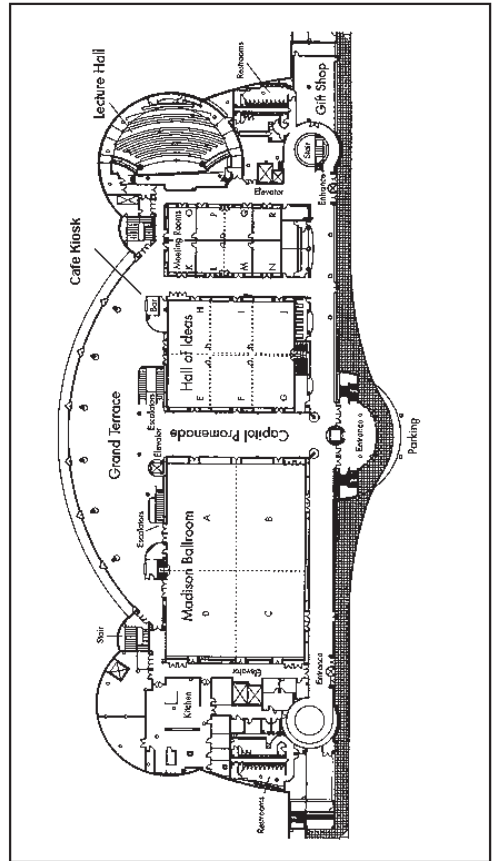
LEVEL 1 - LAKESIDE



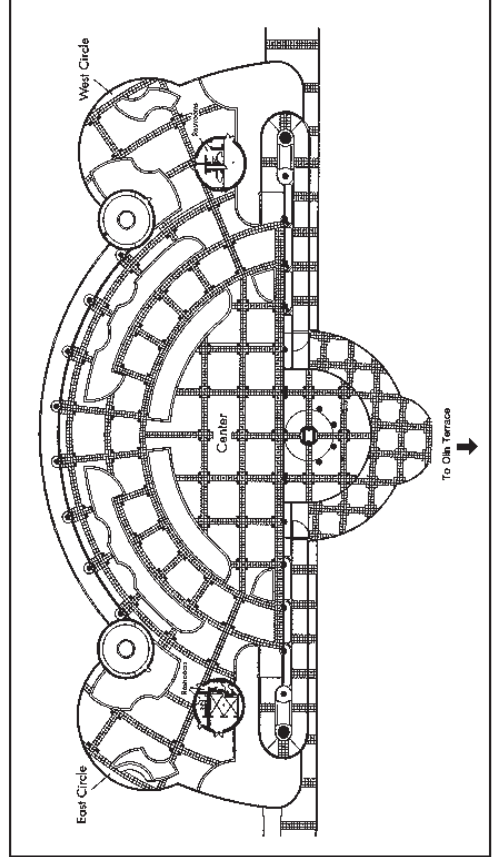
LEVEL 2 - MEZZANINE



LEVEL 4 - MEETING ROOMS



LEVEL 6 - ROOFTOP GARDENS



INVESTIGATE A BUILDING

When you look at a building, try to "read" it by asking yourself these questions:

1 Look

How many stories are there? _____

Is the building simple, or is there a lot of ornament?

CONFIDENTIAL

What shapes do you see? _____

Would you describe the building as:

Symmetrical:
a) Yes b) No

Colorful:
a) Yes b) No

What is it made of?

Does it fit with its neighbors?

Where do people go in and out?
Is the entrance obvious, or
do you have to search for it?

Look at the windows. Where are they
placed? Are they large or small?

2 Formulate Some Theories

Who uses the building?

What do you expect to find inside?

Is the building young or old? Why?

What do you think inspired the design?

3 Evaluate

Is the building welcoming or intimidating?

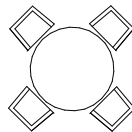
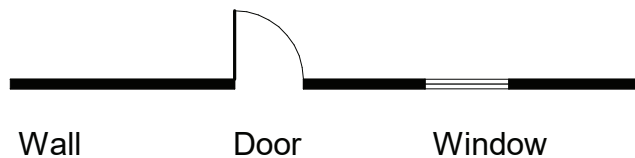
Inside, does it feel open or confining?

Is it easy to find my way around?

How do sound, color and lighting
affect my comfort?

Design a Floor Plan for a House

The Kaufman family has come to you to design their house. Mr. and Mrs. Kaufman have 2 children, Brutus and Broomhilda. After interviewing the entire family, you have discovered that they need a 3 bedroom house. Mr. Kaufman enjoys cooking and eating outdoors. Broomhilda and Brutus would like their bedrooms to be far from their parent's master bedroom. Mrs. Kaufman has asked for something in the house to be unique and different. She doesn't know what it should be but is counting on you to come up with something exciting.



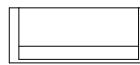
Dining Room Table



The Kaufmans

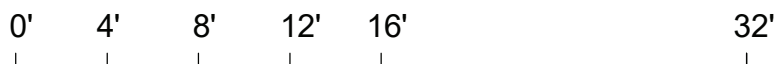


Chair



Couch

Furniture Sizes



Scale 1/8"=1'-0" (You can also think of this as 1 inch equals 8'-0")



240 square feet
12'x20' as shown



180 square feet
9'x20' as shown



144 square feet
9'x16' as shown



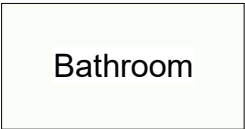
200 square feet
20'x10' as shown



240 square feet
12'x20' as shown



150 square feet
10'x15' as shown



60 square feet
6'x10' as shown

Master
Bedroom
Closet and
Bathroom

Master
Bedroom

Kitchen

Dining

Living
Room

Bedroom

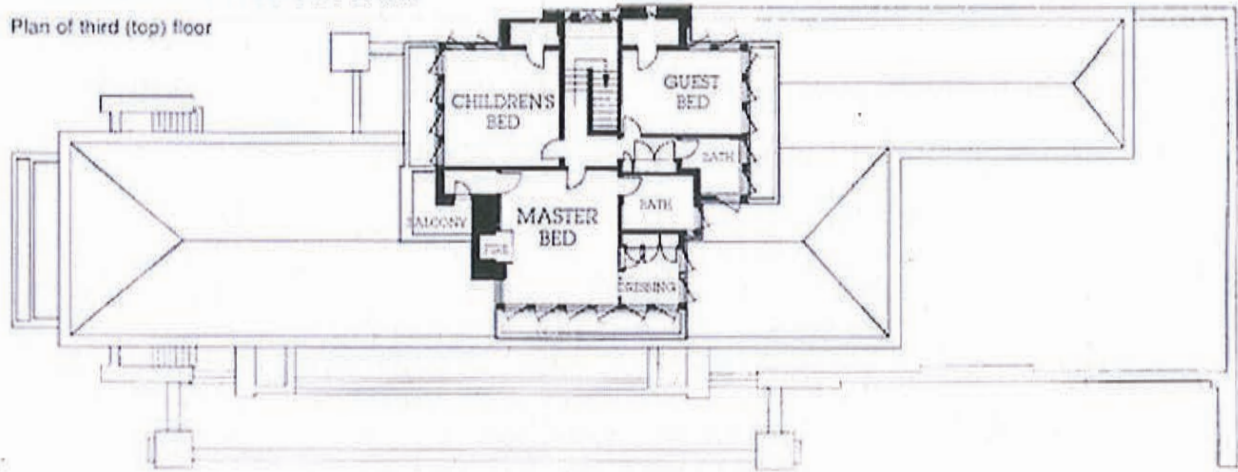
Hallway

Bath-
room

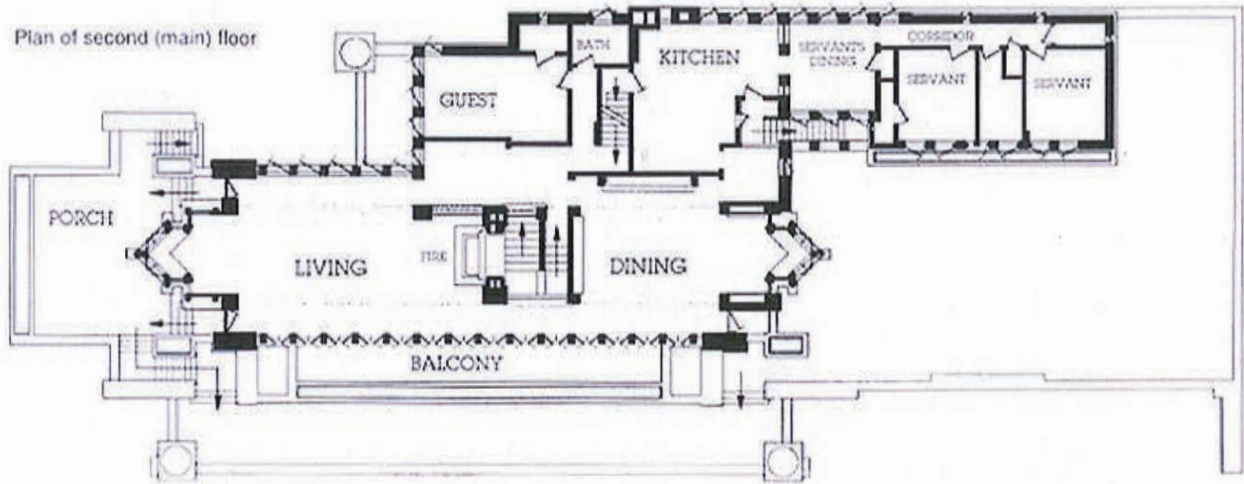
Bedroom

ROBIE HOUSE FLOOR PLANS

Plan of third (top) floor



Plan of second (main) floor



Plan of first (ground) floor

