

BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education St. Louis, June 1–September 15, 2014

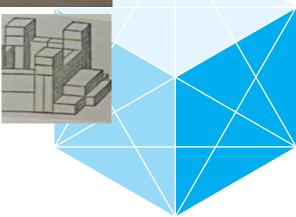


From Frank Lloyd Wright's Childhood to Modern Design Education.

In 1876 Frank Lloyd Wright's mother visited the Philadelphia Centennial Exposition. What She brought back to Boston was a set of gifts for her son that he would later credit as being fundamental to his development as an architect. BLOCKS: From Frank Lloyd Wright's Childhood to modern design Education, explores the practices that emerged from generations of architects and designers in the service of education. Looking through the lens of more than 100 years of design teaching, this exhibition aims to reflect a consistency of thought while displaying a diversity of practice. The history of design education is a story of parallels. It is built of

objects that were not intended to be independent works of art. Rather, what is repeated over time is the use of the object lesson for training the mind through the eyes and hands. Consequent to this focus on utility and the simple nature of the outcomes, these object lessons are only touched on in most histories. In contrast to the attention they receive, these objects are a window into understanding the common foundation under a global spectrum of design and artistic practice. On view are nothing less than the object lessons that have become an educational foundation beneath much of our material culture.





Anybody entranced by the work of Frank Lloyd Wright (1867–1959) is sure to learn about his great influences, nature, Japanese architecture, Louis Sullivan, and the blocks designed by Friedrich Froebel (1782–1852). Referring to the Froebel blocks of his childhood Wright had this to say: "The smooth shapely maple blocks with which to build, the sense of which never afterward leaves the fingers: so form became feeling."1 While the influences of nature, Japanese architecture, and Sullivan are readily apparent in Wright's work, the blocks have been an enigma to many. What is it about them that compelled Wright to give so much credit for his skills to the time he spent with Froebel's toys?

The exhibition begins with an examination of the 'blocks.' On loan from the First publicly funded kindergarten in the country, the Des Peres School–St. Louis, Missouri, founded in 1873. Properly referred to as 'Gifts' and 'Occupations' the blocks were part of a set of tools for teaching very young children not yet ready for an academic education about the nature of materials and assembly.

Blocks



FRANK LLOYD WRIGHT Larkin Company Administration Building 1902 Sepia 14 x 12 inches

ARTIST UNKNOWN Bath 1877

MILTON BRADLEY COMPANY, American Bradley's Kindergarten Material – Third Gift, 1898



Blocks

- 4 Curator's Essay
- 8 Joan Ockman || The Roots of John Hejduk's Nine Square-Grid
- 16 Ellen Lupton || We're All Swiss Now
- 22 Checklist
- The Book of Lesson Plans

BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education St. Louis, June 1–September 15, 2014

Armin Hofmann

Swiss. b. 1920

William Tell 1963

offset lithography

Courtesy Museum of Modern Art New York

Hofmann's towering reputation as a designer, and his work as an educator was built out his contribution to what became the Swiss Style of typography in the 1950s. The Swiss Style typography emphasized geometric san-serif type, organizational clarity, bold typographic statements and asymmetric composition. Teaching at both the Schule für Gestaltung Basel (Basel School of Design) and Yale University, he influenced design education internationally. This poster, based on the play by Schiller, made while in Switzerland embodies much of the rational approach to design that influenced many Americans.

BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education St. Louis, June 1–September 15, 2014

| 1917 to 1933 The Bauhaus: The Adolescence of the Modern Movement — The self-contained play bears the fruit of useful investigation for the practically minded. 1937 to 1960 The Second Wave of Middle-Age — Settling down in America, formal investigation is embraced by the Academy as an effective way to teach, as it had been in the kindergarten of Wright's childhood. Refreshed with new talent from Switzerland and Germany formalism sees its greatest impact. | | 1836 to 1900 Frank Lloy hood" — Embodying the education that came at Enlightenment, Frank L BLOCKS exemplify new the eyes to explore the fingertips. The object lemethod for training the eyes and hands. | ne rethinking of the end of the loyd Wright's vistrategies for using world at our esson became the |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| 1970 to 1995 Built to last: Weathering | | | |
| Postmodernism — Challenged by the need | | | |
| to connect with people, reductive analysis still provides answers to basic needs for | | | |
| education. | | | |
| | | | |
| | | | |

MILDRED LANE KEMPER APT MUSEUM

January 23, 2013

ATTN: Brenda Danilowitz, Chief Curator The Josef and Anni Albers Foundation 88 Beacon Road Bethany, CT 06524

Subject: Loan Request

Dear Mrs. Danilowitz:

In June 2014 the The Mildred Lane Kemper Art Museum, part of Washington University's Sam Fox School of Design & Visual Arts will be producing an exhibition on Modern design education covering the time period from the late 1880's to today. The exhibition focuses on exploratory educational practices that emerged in the nineteenth century. St. Louis, Mo., the city with the first publicly funded kindergarten in the United States is an important location in the story. And was the inspiration for this exhibition. The work of Josef Albers, of course, will be critical in telling our story and is the reason why I am writing.

Please accept this letter as our loan request for the following objects from your collections.

STANDING BIRD, FRONT VIEW, CA. 1917 JAAF: 1976.3.27

UNTITLED, 1936 JAAF: 1976.3.157

STRUCTURAL CONSTELLATION, CA. 1956 JAAF: 1976.3.341

SELF-PORTRAIT, 1917 JAAF: 1976.4.31 TOGETHER, 1933 JAAF: 1976.4.71

SKYSCRAPERS ON TRANSPARENT YELLOW, CA. 1929 JAAF: 1976.6.9

Please inform me of any materials needed from the Kemper Art Museum to meet the loan requirements of the Foundation. I look forward to working with you on this project!

In gratitude,

Eric Köhn, curator Mildred Lane Kemper Art Museum BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education St. Louis, June 6–September 14, 2014

Professional Development

Educational programing will be as substantial part of up coming exhibition BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education, scheduled to be on view at the Mildred Lane Kemper Art Museum June 6 to Sept. 14, 2014. An important part of the story of design education is the passing of ideas from one educator to another. Our exhibition programming focuses on professional development.

Four three-hour workshops will be conducted for K-12 teachers. All four programs will be taught in partnership between a Sam Fox School faculty member and endowed professor early-education specialist Louis Lankford.

The programs will include the nine square-grid problem, basic drawing, basic design, and basic sculpture. These four programs model educational courses work conducted by artist Josef Albers and architect John Hejduk, pivotal figures represented in the exhibition.

Self-Guided

Self-guided interactive interpretive-programing, provided online and on-site, will give visitors the opportunity to see the relationship between the objects in the exhibition and issues of spatial learning that are typically seen within the context of the profession of psychology. This programming draws a natural connection between the arts and sciences. A series of 15 games will be developed in a partnership between game development company Simutronics Corp. and Washington University's cognitive psychology lab under the direction of Cheryl Wassenaar, associate professor of the Sam Fox School.

Event

BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education will open with a public reception from 6 to 8 p.m. Friday, June 6, and will remain on view through Sept. 14, 2014. Both the reception and the exhibition are free and open to the public.

At 1 p.m. Saturday, June 14, Robert McCarter architect and faculty member of Washington University Sam Fox School will host a designers' Conversation and gallery walkthrough with early education specialist Louis Lankford.

.

Educational Resource Area - material list

BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education St. Louis, June 6–September 14, 2014

Professional Development Educational programing

Nine Square-Grid program

- Cresent Board 18 x 18 inches
- HB pencils
- Illustration Board 3 x 18 inch strips
- Tracing Paper
- Steel Rulers 18 inch
- Pen Knife
- Hot melt Glue & Glue Guns

Basic Drawing program

- Tracing Paper
- HB pencils
- Pencil Sharpeners
- Bond Paper
- Plaka

Basic Design

- Illustration Board 18 x 18 Inches, Pre-lined
- Black Construction Paper
- One-Inch Diameter Circles, Pre-Cut
- Scissors
- Poster Tack
- Photo Copier
- Repositionable Adhesive

Basic Sculpture

- Welding Rod, 36 Inch, Straight
- Needle Nose Pliers, Two Each
- White Construction Paper
- Aluminum Screen
- Wire Cutters

BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education St. Louis, June 6–September 14, 2014

| MILD | RED LANE KEMPER A F | T MUSEUM | | | | |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|----------------------------------|--|--|--|
| Blocks | In June 2014, the Mildred Lane Kemper Art Museum will be presenting an exhibition on design education and its history. to get ready, we are learning about the familiarity visitors may have on the topic. | | | | | |
| From to Mo | | | | | | |
| Franl | How familiar are you with the Bauhaus. a Not at all C Somewhat Familiar c Somewhat Familiar | | | | | |
| k Lloy Desi | b Just a little | c Somewhat Familiar d Very Familiar | | | | |
| /d Wrigh | 2. In a sentence, what is kindergart | · | | | | |
| From Frank Lloyd Wright's Childhood to Modern Design Education. | 2 Uarrada var lunarrada esta esabita | otives (Cl. 1 Hd 1) | | | | |
| pood | How do you know about archited a. TV/cable | d Book | g Friend/Relative | | | |
| | b Documentary | e Internet | h I know nothing about the topic | | | |
| | c Magazine Article | f School | I Other (please describe) | | | |
| | 4. Have you visited any buildings designed by Frank Lloyd Wright? | | | | | |
| | a Never visited | c Visited in the past year | | | | |
| | b Visited in the past month | d Visited a year or longer ago | | | | |
| | 7. Does St. Louis once have any Fra | ank Lloyd Wright buildings? | | | | |
| | a Yes | b No | b Don't Know | | | |
| | 8. In general, how interested desig | n are you? | | | | |
| | a Not at all | c Interested | e Depends on the Topic | | | |
| | b Just a little | d Very interested | | | | |
| | 10. Are you a return visitor to the K | (emper? | | | | |
| | a Return Visitor | d First Time Visitor | | | | |
| | 12. What is your zip code? | | | | | |
| | 13. What is your age? | | | | | |
| | a 19 or under | c 30–39 | e 50–59 | | | |
| | b 20–29 | d40–49 | f 60 or above | | | |
| | 14. What is your sex? | | | | | |
| | a Female | b Male | | | | |
| | Thank you for your time. | | | | | |
| | Your input will help to develop a great program. | | | | | |
| | | | | | | |

MILDRED LANE KEMPER APT MUSEUM



From Frank Lloyd Wright's Childhood to Modern Design Education.

PROGRAM REFLECTION REPORT

| date: | intructor names: |
|-------|------------------|
| | |

program name:

no. of participants: program location: (cafeteria/classroom)

no. of adult staff present for the full session duration? Yes No

what activities were organized for the program?

did participants finish provided tasks?

what participant comments demonstrated knowledge of the motivation for the instruction.

was the lesson plane modified during the program? give details

what changes in the plan would have benefited this particular set of participants?

what can you mention that would be of benefit to other partners?

BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education St. Louis, June 6–September 14, 2014

Upcoming Show: Blocks

May 19TH, 2014

Last week we formally announced our upcoming exhibition in the Garen Gallery. From June 6 to September 14, 2014 BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education. Will fill the Garen Gallery at the Kemper. Click here to read about Frank Lloyd Wright's work in St. Louis—many people didn't know. You can also take a look at the Kemper's website for information.

Posted by: Kemper: Press

Permalink | Posted in Exhibitions, In the Press | No Comments

Exhibition Opens: Blocks

June 7TH, 2014

Now open for the world to see, June 6 to September 14, 2014 BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education. Last night's opening brought together artists architects, designers and educators, people who don't attend the same gatherings. Last night's opening saw architect Eric Hall of M3 Studios and designer Eric Thoelke of TOKY Branding + Design. Take a look at the Kemper's website for photos.

Posted by: Kemper: Press

Permalink | Posted in Exhibitions, In the Press | No Comments

Lecture: Joan Ockman June 12TH, 2014

Columbia University's architect and educator, Joan Ockman author of 3 centuries of Architecture Education in America, provided a riveting account of the political machinations and intrigues behind our built environment. Click here to see the video

Posted by: Kemper: Press

Permalink | Posted in Exhibitions, In the Press, Lecture | No Comments

Learn at the Kemper

Nine Square-Grid: One Architect's Start

June 28TH, 2014

John Hejduk's (1929 – 2000) Nine Square-Grid problem as a tool for educating new architecture students since the 1950s. 15 teachers from the St. Louis public schools found out what it was all about. Click here to see the great projects.

Posted by: Kemper: Press

Permalink | Posted in Exhibitions, Education | No Comments

Learn at the Kemper

Basic Drawing: A New Line

July 12TH, 2014

For those thinking a line is just a line, today's workshop provided a new way to look at the world. Our Sam Fox School faculty member provided some great tips to our guest educators. Click here to see the great work.

Posted by: Kemper: Press

Permalink | Posted in Exhibitions, Education | No Comments

Learn at the Kemper

The Dot is the Thing: Basic Design

May 19TH, 2014

Today was the day of dots at the Kemper. Seeing dots, making our own dots, what was interesting about the dots was finding the space between them was just as important as the dots for creating a design. Click here to see the great work.

Posted by: Kemper: Press

Permalink | Posted in Exhibitions, Education | No Comments

Exhibition Catalogue Now on Sale

June 20TH, 2014

The Kemper Museum has published BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education. The illustrated catalog features an essay by Eric Koehn, images of all of the works on view, as well as designer interviews and essays from author Ellen Lupton of the Cooper-Hewitt, National Design Museum and architect Joan Ockman. You can take a look at the Kemper's website for information.

Posted by: Kemper: Press

Permalink | Posted in Exhibitions, Museum Shop | No Comments

Learn at the Kemper

Basic Sculpture: a Designer's Take

July 19TH, 2014

The famous Bauhaus educator Josef Albers came to life at the Kemper with some help from Sam Fox school faculty. St. Louis area school teachers learned all about, not just the teaching methods of the famous educator, but also left with their own inspired creations.

Take a look at the Kemper's website for photos.

Posted by: Kemper: Press

Permalink | Posted in Exhibitions, Education | No Comments

BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education St. Louis, June 6–September 14, 2014

Exhibition Guided Tour: Blocks

July 26TH, 2014

Robert McCarter, architect and faculty member of Washington University Sam Fox School, hosted a designers' conversation and gallery walkthrough with early education specialist Louis Lankford. The audience members provided some fantastic questions. take a look at the Kemper's website for information.

Posted by: Kemper: Press

Permalink | Posted in Exhibitions, Education | No Comments

A Special Surprise Visit August 14TH, 2014

At 89 years old HOK founder Gyo Obata isn't seen around town as often as he used to be. So it was a special treat when he visited the exhibition and gave us his personal story of his 1st year studio experience at Washington University. Take a look at the Kemper's website for photos.

Posted by: Kemper: Press

Permalink | Posted in Exhibitions, In the Press | No Comments

Facebook Posts

BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education St. Louis, June 6–September 14, 2014

On Loan from MoMA, Armin Hofmann's "William Tell" Arrives at the Kemper Hofmann's towering reputation as a designer was built out his contribution to what became the Swiss Style of typography in the 1950s.

The Kemper gets special visit from the director of the Josef and Annie Albers Foundation. Our final objects arrive.

The excitement is palpable. Everything's coming together for the new BLOCKS exhibition.

The long-awaited BLOCKS will open on Friday! The Kemper website gives a sneak peak: kemperartmuseum.wustl.edu

Great photos from the opening of BLOCKS exhibition, curated by Kemper guest curator Eric Koehn.

Join us as Joan Ockman pays homage to Heyduk's Texas Rangers' legacy Thursday at the Kemper:

kemperartmuseum.wustl.edu

St. Louis Beacon Review of BLOCKS at The Kemper: "Objects That Tell About the Past and the Future"

Area educators Join us this weekend for a special program and learn about the Nine Square-Grid

Area educators Join us this weekend for a special program and learn about what a line can do.

I Impromptu performance Oren Safdie's 2003, one-act-play, Private Jokes, Public Places, dramatizes the psychological environment of the critique. Performed by architecture students for workshop visitors.

The AIA's Todd Jacobs visits BLOCKS tells some grate stories.

kemperartmuseum.wustl.edu

WINSLOW HOMER's Blackboard, 1877 draws special attention from Kindergarten teachers.

Carondelet Historical Society offers the early kindergarten experience brought back to life.

Area educators join us this weekend for a special program and learn about the simple dot.

Area educators visit us this weekend for a special program and learn about the forms our everyday materials can be coaxed into.

Jessica Baron Reviews BLOCKS "From childlike to masterful" @Baron. "The Riverfront Times" explains why it's not to be missed

Join us this weekend for a special Saturday event. Get a behind the scenes view of the arts from the student experience.

Kemper's director SABINE ECKMANN, PHD on why art should be critically approached:

COCA to offer Kindergarten classes with the Nine Square-Grid. cocastl.org

All art began a relationship with the world around us and trying to make sense of that consists of objects and events, as they are perceived. - Gyo Obata at BLOCKS

Only a few more days to experience BLOCKS at the Kemper. "The Riverfront Times" explains why it's not to be missed

Website Review

BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education

St. Louis, June 6-September 14, 2014

Museum of Modern Art-New York

Bauhaus 1919–1933: Workshops for Modernity

www.moma.org/bauhaus

For the recent Bauhaus exhibition, MoMA created a micro-site within their domain. The resources that they have to bring to projects, makes the MoMA website a great framework for critiquing others sites. The first impression of the site displays the graphic identity invented for the exhibition. This identity is inspired by the exhibition content but not a slavish pastiche. On the exhibition's main page the navigation is divided in two parts. The center of the page provides access to content including a time line and object photos. Surrounding the main content are links to exhibition programs, publications, interactives and links for further information. While the site provides access to many of the objects in the expedition, it does not re-create the exhibition online. Instead, it uses web-based media such as video, animation and links to provide a dynamic exploration of the content. The site is clearly focused to a general user. All of the content is provided in short digestible chunks. There are no scholarly length articles available on the site.

The Mildred Lane Kemper Art Museum-St. Louis

Notations: Contemporary Drawing as Idea and Process

kemperartmuseum.wustl.edu/exhibitions/6743

The Kemper's website saves the resources of time and development work by listing all its exhibitions within its pre-existing website framework. The identity for each exhibition is created with object photos. These photos are used as backdrops behind the framing museum identity. A downside to this method of organization is that links to program supporting the exhibition are less visible as they are grouped together with other Kemper programs on the site. While the organization has been designed with an eye to keeping maintenance from becoming too burdensome, the web design itself is tightly crafted and very professional. The audience for the shows web presence at the Kemper is general interest. However, in the case of the notations exhibition, a show that I see as having some parallels to mine, a supporting website was financed by a lender. This extra website provided access to scholarly resources as well as general interest information about the art and artists.

Los Angeles County Museum of Art

California Design, 1930–1965: "Living in a Modern Way"

lacma.org/art/exhibition/californiadesign

At LACMA the idea is to list as many links as possible using a single page. In addition to not taking advantage of progressive disclosure, the items on the page are of similar import and its; consequently, the 1st impression of the site is one of mild disorganization. LACMA approach is similar to the campers in that they do not use a micro site. However, it is easier to find programming related to the exhibition. Scrolling down, the page is divided into multiple columns with images that visually anchor each chunk of information. Like the MoMA and Kemper sites this site's focus is a general audience. The main purpose of the information displayed is to engage curiosity.

Eric Koehn

Marilu Knode

FA12-ANTHRO6139

November 8, 2012

BLOCKS: From Frank Lloyd Wright's Childhood to modern design education.

In 1876 Frank Lloyd Wright's mother visited the Philadelphia Centennial Exposition. What She brought back to Boston was a set of gifts for her son that he would later credit as being fundamental to his development as an architect. *BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education*, explores the practices that emerged from generations of architects and designers in the service of education. Looking through the lens of more than 100 years of design teaching, this exhibition aims to reflect a consistency of thought while displaying a diversity of practice. In addition to being a story of parallels, the history of design education is built of objects that were not intended to be independent works of art. Rather, what is repeated over time is the use of the object lesson for training the mind through the eyes and hands.

Consequent to this focus on utility and the simple nature of the outcomes, these object lessons are only touched on in most histories. In contrast to the attention they receive, these objects are a window into understanding the common foundation under a global spectrum of design and artistic practice. Truly, on view is nothing less than the object lessons that have become an educational foundation beneath much of our material culture. (Brosterman 1997)

• • •

Anybody entranced by the work of the architect Frank Lloyd Wright (1867 – 1959) is sure to learn about his great influences, nature, Japanese architecture, the architect Louis Sullivan, and the blocks designed by the Swiss born educator, Friedrich Froebel (1782 – 1852). Referring to

the Froebel blocks of his childhood Wright had this to say: "The smooth shapely maple blocks with which to build, the sense of which never afterward leaves the fingers: so form became feeling." While the influences of nature, Japanese architecture, and Sullivan are readily apparent in Wright's work, the blocks have been an enigma to many. What is it about them that compelled Wright to give so much credit for his skills to the time he spent with Froebel's blocks? (Brosterman 1997)

Our exhibition begins with an examination of the 'Blocks' on loan from the first publicly funded kindergarten in the country, the Des Peres School–St. Louis, Missouri, opened in 1873. Properly referred to as 'Gifts' and 'Occupations,' the blocks were part of a set of tools for teaching, or rather, cultivating the inherent faculties of children too young for academic education. (Lupton 2000)

The use of the Blocks embodied the educational ideas of 18th century philosopher Jean-Jacques Rousseau (1712 – 1778) and an adherent to Rousseau's educational thinking, Swiss educator Johann H. Pestalozzi (1746 – 1827). Beginning with Rousseau's ideal of educating the total person, Pestalozzi advocated reducing knowledge to elemental parts addressed in ordered exercises. Specifically, in his *The A.B.C. of Anschung* (Sense Perception), and described by historian Clive Ashwin, Pestalozzi sought to "break down the complexity of nature into its constituent forms ... to identify and 'elementarise' the underlying geometry of the visual world." Pestalozzi identified the use of drawing with a limited vocabulary of forms; vertical, horizontal, and diagonal lines; as a method of developing an understanding of the world by exposing its most elemental, most understandable properties, beginning with what he saw as the most fundamental constituent, the square. (Lupton 2000) As described by Pestalozzi "Vision is the absolute fundament of all knowledge, in other words, that every piece of knowledge must derive from vision and must be led back to it." (Wick 2001)

Slow to find his calling in education, Froebel had a rich life history by the time his interests in teaching methods came to the fore. Before becoming an acolyte of Pestalozzi, he was an accomplished crystallographer more comfortable with the physical world than the world of words that his father, a minister, favored. However, through an understanding of the world developed as a crystallographer, he found an insight that paralleled Pestalozzi's intuition to guide children in describing the manifestations of the environment in its most understandable parts. Froebel's understanding of the basic forms, the cube, the cylinder and the sphere possessed unity of common form; furthermore, he understood the shared properties of the basic forms could become exposed to children through guided play, specifically with his Gifts and Occupations. (Brosterman 1997)

What is just as important as identifying the desired impact of the Blocks however, is knowing how Froebel's Blocks where intended to be used. By design, the gifts are to be introduced him to a child sequentially. Beginning at six months, with the first gift—a set of knit wool balls; and ending with the twentieth gift, modeling clay—at the age of six. Each gift is designed to be appropriate to the developmental level of the child at a given age. (Brosterman 1997)

However, Froebel's understanding of developmental stages was introduced and framed by Rousseau and had more to do with the 18th century understanding of the evolution of societies and the individual from a state of unconditioned savagery to normalized and civil members of society. This idea is in contrast to the current understanding of child development based on biological conditions. In the 1876 St. Louis Public Schools Annual Report the Kindergarten was referred to as a "system of culture for the young" for the benefit of society. (St. Louis Public Schools 1876)

Divided into two major groupings, only the first set of Froebel's objects is properly referred to as gifts. These gifts, comprised the wooden blocks that Frank Lloyd Wright referred

to, are used as given, without modification. The second set, called *occupations* are construction and workshop experiences.

Froebel's *Third Gift* and the iconic example of the Blocks, intended to be introduced to three- and four-year olds, simple in the extreme, was comprised of eight small cubes formed out of dividing a two inch cube once in each direction. As described in his book *Die Pädagogik des Kindergartens* but published in 1862 after his death, the *Third Gift* was played with on a gridded surface of one-inch squares. While the grid provides the structure of vertical and horizontal lines that Pestalozzi provided for structuring drawing, the properties of Froebel's blocks can be investigated in a number of ways: *hand exercises*, *knowledge and nature forms*, and *beauty forms*. In addition, storytelling and song were used to further enrich the play experience that surrounded the universal geometric forms of the gifts. (kraus-Boelte 1877)

The knowledge and nature forms create an abstracted representation of the environment known by the child. In plate V, on exhibit from *Manuel Pratique des Jardins D'Enfants*, J.-F.

Jacobs, Brussels, 1859. Examples of three-dimensional abstracted forms are shown including a church (no. 21) and an engine (no. 24). (kraus-Boelte 1877) (Boelte-26). The hand exercises presented in plate 3, illustrate relationships of part to whole and simple fractions while plate 5, beauty forms, illustrates the use of the blocks in creating two-dimensional patterns guided by the underlying grid. With all of the creations, it was important that forms were not destroyed, but instead, each form grew out of another, just as a two-dimensional pattern grew out of the three-dimensional cubes. This method of working thus created a systematic investigation of the material and an understanding of unity. Froebel described the patterns as *dance* forms "wherein each individual is there on account of the whole and the whole on account of the individual." (Brosterman 1997)

The Occupations invented by Froebel are process focused and include perforating, sewing, drawing, inter-twining, weaving, folding, cutting, peas-work, cardboard and clay

modeling. The nineteenth, called *Peas Work*, presented an opportunity to investigate the volume and brought unity to the set of gifts and occupations by restating the elemental forms in a novel media. (Brosterman 1997) Peas Work is best described in the St. Louis Public Schools' *1876 Kindergarten Document*: "peas are soaked in water for six or eight hours, and pieces of wire, pointed at the ends, are stuck into them for the purpose of imitating real objects and the various geometrical figures. Skeletons are thus produced, which develop the eye for perspective drawing most successfully. Sticks belonging to the eighth gift are also used for this purpose." As described by Norman Brosterman, architect R. Buckminster Fuller (1895 to 1983) at least partially credited Froebel's space frame of *Peas Work* with inspiration behind his geodesic dome. (St. Louis Public Schools 1876)

Beyond being used to guide a remarkably sophisticated level of play; however, an astonishing reemergence of the forms produced by the *Gifts* is seen in the work of Modern artist and designers beyond the Americans Wright and Fuller. Examples of work by the Swiss Architect Le Corbusier, Dutch artist Piet Mondrian (known kindergartners) and the German artist-designer, and trained educator, Josef Albers, suggest the abstract forms of the *Gifts* became, if not folded in to the development of a modern form-vocabulary, as claimed by the Brostermann, at least the *Gifts* prefigured the development of there form vocabulary. It is important to bear this point in mind: so basic is the design of the Gifts and Occupations that the reappearance of the forms is easily an example of convergent evolution. (Brosterman 1997)

The history of the Bauhaus explicitly links the artistic movements of De Stijl and Constructivism for the stylistic influences that the Bauhaus became associated with after its years in Weimar. Members of the Bauhaus repeatedly rejected style as a legitimate aspiration. What they did advocate was universality by a reduction to the essentials of form and function. If, however, De Stijl and Constructivism had been influenced by Rousseau's *The A.B.C. of Anschung* is a question for research. (Wick 2001)

. . .

Ten years after Susan Blow (1843 – 1916) started her Des Peres School kindergarten (1873 – 1935), every public school in St. Louis had embraced the kindergarten movement. By the time of the First World War Friedrich Froebel's kindergarten idea was ubiquitous; covering Europe, North America and Japan.

One of the many trained primary school teachers was the Swiss born artist and educator Johannes Itten (1888 – 1967). Beginning the year after the war, Itten joined architect Walter Gropius (1883 – 1996) in an educational experiment called the Bauhaus (school of building) starting in the German city of Weimar. Gropius' grand idea was to reconcile the fine arts and crafts under a school of architecture.(Wick 2001)

As described by Itten decades later, in 1919 the Bauhaus in Weimar and its students were suffering the same catastrophic economic problems as the rest of Germany. A great draw to the school for students was the hope of finding food and a place to stay. Itten describes the first classes at the Bauhaus being conducted on the floor in rooms with no tables and no heat. In this context students were motivated to attend simply by basic needs. Consequently, the Bauhaus faculty found that students were not capable of learning the material being taught. (Itten 1966)

The need for remediation became the motivation for Itten, a reader of Pestalozzi and Rousseau, to develop the exercises that became the famous preliminary course called the Vorkurs. The self-contained play invented for cultivating the inherent faculties of students in the kindergarten was also useful for focusing the attention of students not yet ready for design education. The Vorkurs course was adopted by in large by later art programs through the dispersal of Bauhaus faculty and students. (Wick 2001)

Developing the Bauhaus basic course, Itten like Froebel, began with Rousseau's ideal of educating the total person, hence his practice of beginning the class with physical exercise, and took advantage of Pestalozzi's insights, reducing knowledge to elemental parts addressed in

ordered exercises for the sake of cultivating the inherent faculties of the students. Specifically, Itten's goal was to engage the students in the observation of contrasts. Exercises addressed phenomenon such as the contrasts of light and dark, color, material and texture, form, rhythm, as well as expressive forms and subjective forms. (Itten 1966)

Joining Itten, first as a student in 1920 and later becoming the leader of the basic course in 1925, was the designer and artist, Josef Albers (1888 – 1976). Albers is best known today for his work on color theory that he exemplified in his series of paintings titled *Homage to the Square*. Albers, like Itten, had trained as a primary school teacher and continued many of Itten's teaching ideas, his theory of contrast being the most notable. However, there were important new ideas that Albers brought to the preliminary course. By rejecting representational forms in his exercises, he was able to bring a sharper analytic focus to universal formal principles such as harmony, rhythm, scale, proportion, and symmetry. Additionally, Albers brought greater attention to the nature of materials and a method of investigation to the course based on working in series, enabling the comparison of work against itself. (Wick 2001)

Few of the materials exercises conducted by Albers at the Bauhaus are well documented. The use of simple newspapers, however, is an often-told exception. Albers entered the class giving papers to his students. Enigmatically explaining, the assignment was to investigate the material with an eye towards economy and material appropriateness, then leave the room. Returning hours later to find representational objects like boats and such, and rejecting those as being better made with other materials, he selected an object by one student, simply folded in half and, like a paper screen, stood upright on its end. As retold by one student: (Wick 2001)

Joseph Albers explained to us how well the material was understood and utilized—how the folding process was natural to paper, because it resulted in

making a pliable material stiff He further pointed out to us that a newspaper lying on the table would be hidden. Now the paper was standing up, both sides had become visually active. The paper had lost its tired look—its lazy appearance. After a while we caught on to his way of seeing and thinking. Fascinating studies in all kinds of materials, like paper, corrugated cardboard, kitchen matches, wire, metal, were produced. (Wick 2001)

. . .

In 1933, 14 chaotic years after the Bauhaus opened, the school disbanded, much of its faculty immigrating to the United States. Settling down in America, formal investigation became embraced by the Academy as an effective way to teach, as it had been in the kindergarten of Wright's childhood. Refreshed with new talent from Switzerland and Germany formalism saw its greatest impact. (Kelly 2001)

Josef Albers, at the time of the Bauhaus' closing, the leader of the basic course, took a position at Black Mountain College in North Carolina, joining other notable educators such as R. Buckminster Fuller. Albers later moved to Yale University. Walter Gropius fled Germany in 1934, later joining the department of architecture at Harvard, after establishing a practice in Boston. László Moholy-Nagy and Ludwig Mies van der Rohe (1886 – 1969), commonly known as Mies, moved to Chicago to head what became the Illinois Institute of technology (IIT) department of architecture in 1937. The less well known, Werner Drewes (1899 – 1985), a Bauhaus student, joined the faculty at the School of Fine Arts, Washington University in St. Louis, becoming director of the first year program in 1961; (tobeycmossgallery.com) after teaching at Brooklyn College, New York; and the Chicago Institute of Design – originally László Moholy-Nagy New Bauhaus. (Wick 2001)

Of all the members of the Bauhaus faculty, the schools third and final director, Mies van der Rohe, is the most widely known architect. Together with Frank Lloyd Wright, and Le Corbusier, he is considered a leader in the development of Modern architectural practice.

Inspired by the glass and stone gothic cathedrals of Europe, Mies developed what he referred to

as "skin and bones" architecture; although his aphorism "Less is more" is more often quoted to describe his design philosophy. His was a strict, rational, design language.

In contrast to Johannes Itten, Mies joined the Bauhaus at its end, three years before its disbanding by the Nazis. By 1930 and Mies van der Rohe's arrival, the Bauhaus was no longer devoted to Gropius' pedagogical ideal of an education driven by a universalist belief, a belief that brought all arts together under architecture. The exception to this discontinuity was Johannes Itten's preliminary course that lasted through all eighteen years and found continuation in one form at IIT. A member of the Bauhaus from 1930 to 1933, he joined after it had become entirely a school of architecture under Walter Gropius' successor Hannes Meyer (1889 – 1954). By this time the Bauhaus was no longer devoted to Gropius' pedagogical idea; an education driven by a Universalist belief that all arts should be brought together under architecture. (Wick 2001)

In Chicago, Mies van der Rohe, ironically viewed as a poor teacher by Walter Gropius and others, remained an educator and continued his pragmatic approach to teaching architecture; (Wick 2001) however, he found the same deficiency of visual acuity in the students in Chicago that Johannes Itten found in Germany. Consequently, Mies' asked his colleague from the Bauhaus, photographer Walter Peterhans (1897 – 1960) to develop an eye-training program. While the exercises were new, they did continue the tactic of using the isolation of visual qualities from the complexity of context. Specifically The goal of the Peter Hans preliminary course was to develop an appreciation of proportion, form, color, texture, and space. Peter Hans program was used, largely unchanged, for 30 years. First taught personally by Peterhans through the 1950s and then by his students up to 1960 and then, their student Benjamin Riley. Riley continues to teach using many of the same lessons that were developed by Peterhans. (Wetzel)

Developed around the understanding that "How one draws a line is important to how one starts to see," drawing is rigorously developed in the Peterhans/Mies pedagogy. This is the same belief espoused by Pestalozzi in is teaching of early child hood education. Titled Plate 1 – four

white spaces, Peterhans described the instruction of its use of object lessons for developing a critical sense of proportion and line quality. While a number of exercises where used, 10 over four semesters, each exercise was developed iteratively till the student "got it right." For example: (Wetzel)

Four white spaces contained by subdividing a full-size sheet.

- The black stripe should not swing or float aimlessly on the surface
- They should cut deep and decisively into the white space.
- They should reintegrate the 4 white spaces they define. Expanding the configuration into a union that is crisper, more distinct, more articulate throughout, than the one individual original space.
- None of the spaces must overflow or bulge.
- None of them must be squeezed in or pushed out.
- Each one should be equally dense equally deep in itself up that nature throughout.
- The spatial quality finally obtained should obliterate the pure material quality of the white space."

—Walter Peterhans (Wetzel)

Leaving Germany, Albers joined the newly founded Black Mountain College in 1933. Black Mountain was founded on the progressive educational ideas of John Dewy and thus had a spirit of purpose not dissimilar from the Bauhaus. This similarity comes down to the idea of educating the whole person. Albers familiarity with John Dewey's writing through German translation made his arrival natural. Albers teaching at Black Mountain focused on the same fundamental lessons of perception and process that were stressed at the Bauhaus. In fact no upper-level coursework was offered. (Wick 2001) (Craig-Martin 1995)

Albers' tenure at Black Mountain ended in 1950 when he was invited to chair the new Department of Design at Yale University. This program was the first in America to offer a degree in graphic design and was key in establishing the practice as a profession in the 1960s. Albers stepped down in 1958 but his coursework taught by handpicked students continued for many years. (Craig-Martin 1995)

The four courses taught by Albers at Yale were also introductory and open to students not majoring in art or design. These courses were not considered art courses but instead were offered for developing "visual experience and awareness" and were not intended as art instruction. (Craig-Martin 1995)

The four courses included color, basic drawing, basic design and basic sculpture. While these courses still exist in many institutions it is important to look closely at their form as developed by Albers. Just as the grid and its structure was removed from the kindergarten classroom in 1920s America, the rigor in Albers courses is no longer present in the imitation's of most of the courses inspired by his teaching available today. (Craig-Martin 1995)

. . .

While Mies van der Rohe was in Chicago and Joseph Albers in North Carolina, an American architect from California kindled their same formal approach to design education in Texas. In 1951, Harwell Hamilton Harris the first director of the Texas School of Architecture, Austin, was interested in recruiting faculty that possessed an affinity for the formalist approach to analysis espoused by Josef Albers. The group he brought together became known as the Texas Rangers.

John Hejduk (1929 – 2000) arrived in Texas in 1954 from the Harvard of Walter Gropius. Inspired by the work of Le Corbusier, he employed what is known as the Nine Square-Grid problem as a tool for educating new architecture students. An invention of artist and Albers student at Yale, Robert Slutzky, this exercise is intended to isolate formal qualities from the complexity of context and was in common use from the 1970s until the 1990s. (Gilley 2011)

The nine square grid exercise is described as "a grid of nine equal cubes, three units wide by there units deep, into which a given number of panels of great cardboard could be inserted on edges. These panels could then be arranged so as to enclosed, the following, in divide any number of elementary spatial configurations." (Gilley 2011)

Ironically, while the exercise encouraged exploration, its formal abstraction is sometimes blamed for the retreat into applied symbolism that was the hallmark of postmodern architecture. In response to this artificial result, new design exercises were developed. Also ironically, one form of these new exercises focus on exploring material properties, always a fundamental part of Mies' teaching and Josef Albers' basic phenomenal exercises. (Love 2003)

. . .

The celebrity nature of fine arts has brought visibility to many of Alber's art students. Black Mountain included Robert Rauschenberg and Cy Twombly; while, Chuck Close, Nancy Graves, Eve Hesse, Brice Marden, and Richard Serra were students of his at Yale. But Albers also had a surprising number of acolytes who followed him into education; their anonymity makes his impact a more difficult story to tell. However, his teaching practices in America may have found there greatest champion in his student Rob Roy Kelly (1926 – 2004). (Craig-Martin 1995)

In addition following Albers' example in the classroom, Kelly, after studying under Albers at Yale hired many of his graduates into other university programs. However, after the well of Albers' students ran dry following Albers retirement in 1958, a connection to a second wave of European design thought enriched perceptual teaching. Armin Hofmann's (1920 –) Student Inge Druckrey (1940–) inspired a new set of design exercises for the studio. The consequence of this confluence may be to think of graphic design education as an Albers/Hoffman legacy. (Kelly)

The Swiss designer and educator Armin Hofmann's reputation was built on his contribution to the Swiss Style of typography in the 1950s. The Swiss Style emphasized geometric san-serif type, organizational clarity, bold typographic statements and asymmetric composition. Teaching at both the Schule für Gestaltung Basel (Basel School of Design) and Yale University, he influenced design education internationally with his work, writing and lectures. (AIGA 2011)

Rob Roy Kelly's passion as an educator inspired him to leave behind one of the clearest records of pedagogy of any design educators. Kelly's writing about his teaching influences explicitly credit Armin's student Inge Druckrey for inspiration in the specifics tactics of his teaching. The Collected Writings of Rob Roy Kelly, archived at the Rochester Institute of Technology is not just an outline of what became of the Bauhaus ideas in the United States, but lesson plans as well with remarkable detail. The *Shape and Line Problem* under the course *Perceptual Studies* is a case in point. In addition to listing general Objectives, Materials, general Criteria and the Working Procedure, he includes a list of typical criticisms with 31 points to remember. (Kelly)

...

Exploring the practices that emerged from the generations of architects and designers in the service of education from Frank Lloyd Wright's childhood to today is an ambitious task for a modest exhibition. However, summarizing the wave of history that takes us to this point underscores many recurring themes. First is the persistent assessment that there is a continual need for remediation. Isolating visual qualities from the complexity of context does not come easily to most people, regardless of interest. In addition, what began with Pestalozzi's desire to 'elementarise' the world into its underlying geometry began a faithful search for a utopian universality in geometry. This idea proved simplistic but it was a seed that did bear fruit. The search found that, the process of cultivating inherent faculties of perception—visual or otherwise requires commitment. Also, not surprisingly, working with a systematic investigation of a subject, by starting with breaking down the complexity of its nature into its constituent forms, creating a taxonomy of sorts, is an effective approach. This was a key lesson of the enlightenment. Reducing knowledge to elemental parts addressed in ordered exercises for the sake of cultivating the inherent faculties of the student and developing a unity of understanding

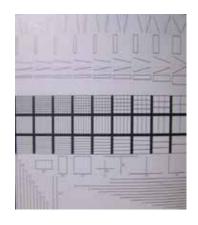
for the basis of common values is a time honored idea and it is the thread that runs through all the objects on display.

- 1. Maria Kraus-Boelte, *The Kindergarten Guide: An Illustrated Hand-Book, Designed for the Self-Instruction of Kindergartners, Mothers, and Nurses*, (New York: E. Steiger & Co., 1877), pp. 22.
- 2. Rainer K. Wick, *Teaching at the Bauhaus*, (Ostfildern, Germany: Hatje Cantz Publishers, 2001), 20.
- 1. Wetzel, Catherine, "Evolution of Visual Training," Lecture, 2011, Web, vimeo.com/22970526. (Wetzel)
- 2. Johannes Itten, *Design and Form: The Basic Course at the Bauhaus*, (Ravensburg, Germany: Reinhold Publishing Corporation, 1966), 22.
- 3. Ellen Lupton, *The ABC's of Bauhaus, The Bauhaus and Design Theory*, (Princeton: Princeton Architectural Press, 2000), 22.
- 4. Norman Brosterman, Inventing Kindergarten, (New York: Harry N. Abrams, Inc., Publishers, 1997), 22.
- Michael Craig-Martin, "The Teaching of Josef Albers: A Reminiscence," *The Burlington Magazine*, 137, no. 1105 (1995): 248-252,
- 6. Timothy Love, "Kit-of-Parts Conceptualism Abstracting Architecture in the American Academy," *Harvard Design Magazine*, no. 19 (2003): 1-5,
- 7. Rob Roy Kelly, "The Early Years of Graphic Design at Yale University," *Design Issues*, 17, no. 3 (2001): 3-14,
- 8. Gilley, Amy Bragdon. 2010. *Drawing, Writing, Embodying: John Hejduk's Masques Of Architecture*. PhD dissertation, Virginia Polytechnic Institute and State University. Alexandria: scribd. (Publication No. 112464849.)
- 9. Frederick M. Logan, "Kindergarten And Bauhaus," College Art Journal, 10, no. 1 (1950): pp.36-34,
- Muschamp, Herbert. "John Hejduk, an Architect And Educator, Dies at 71." The New York Times, , sec.
 Arts, July 6, 2000.
- 11. Fox, Margalit. "Robert Slutzky, 75, Painter and Architectural Theorist, Dies." *The New York Times*, , sec. Arts, May 7, 2005. (Fox 2005)
- 12. Kelly, Rob Roy. Rochester Institute of Technology, "Reflections of Josef Albers." Accessed September 26, 2012. http://www.rit.edu/~w-rkelly/resources/pdf/03_ped/ped_alb.pdf.

- 13. Kelly, Rob Roy. Rochester Institute of Technology, "Courses: Perceptual Studies." Accessed September 26, 2012. http://www.rit.edu/~w-rkelly/html/pdf/04_cou/cou_per.html.
- Tobey C Moss Gallery, "www.tobeycmossgallery.com." Accessed November 13, 2012.
 http://www.tobeycmossgallery.com/werner_drewes_bio.html.
- 15. St. Louis Public Schools (Saint Louis, Mo.). Board of Directors, 1876 St. Louis Public Schools Annual Report, (Olshausen & Co, 1876).
- 16. Carondelet Historical Society, *History of Des Peres School and Susan E. Blow's Kindergarten*, (St. Louis: 1987).

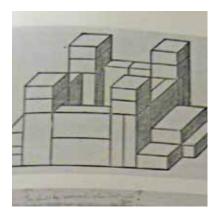
Essay Items

BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education St. Louis, June 1–September 15, 2014























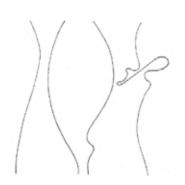






















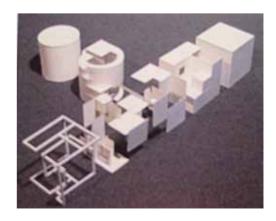












Exhibition Checklist

BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education

Kemper Art Museum, Garen Gallery, St. Louis, June 1-September 15, 2014

A. N. MYERS & COMPANY LONDON, England

Peas Work, 1860 wood and dried peas Dimension Unknown Lender Unknown

JOSEF ALBERS, German (1888-1976)

Skyscrapers B (also known as Skyscrapers II), 1929 sandblasted flashed-glass, 14 1/4 x 14 ¼ inches
Hirshhorn Museum and Sculpture Garden, Smithsonian Institution, Washington

JOSEF ALBERS, German (1888-1976)

Interactions in Color, 1963 2 v.: ill. (chiefly col.); in box 14 x 11 1/2 x 2 inches Carnegie Mellon University Hunt Library, Pittsburgh

ARTIST UNKNOWN

Exercise for preliminary course taught by Josef Albers, n.d. industrially painted wire screen 6 7/8 x 7 5/8 inches
The Josef and Anni Albers Foundation, Bethany, Connecticut

Exercise for preliminary course taught by Josef Albers, n.d. industrially painted wire screen 13 9.16 x 6 13.16 inches

The Josef and Anni Albers Foundation, Bethany, Connecticut

EUGEN BATZ, German 1905-1986

Exercise for color-theory course taught by Vasily Kandinsky, 1929-30 tempera over pencil on black paper 15 7/16 x 12 15/16 inches Bauhaus-Archiv, Berlin

Exercise for color-theory course taught by Vasily Kandinsky, 1929-1930 tempera over pencil on black paper 16 5/8 x 12 15/16 inches Bauhaus-Archiv, Berlin

OTTI BERGER, German 1898-1945

Tasttafel (touch panel) made for preliminary course taught by Laszlo Moholy-Nagy, 1928 threads and board on wire backing with loosely attached multicolored square paper cards 5 1/2 x 22 7/16 inches Bauhaus-Archiv, Berlin

PAUL CITROËN, German 1896–1983

Color analysis of a Madonna painting, after an embroidery from Bavaria or Tyrol of c. 1800, for preliminary course taught by Johannes Itten, c. 1921 cut-and-pasted colored paper, India ink, and gouache on paper 9 1/4 x 7 11/16 inches
Bauhaus-Archiv Berlin

AUGUSTE COHN, German (1856–1942)

 ${\it Burch f\"ur das Fr\"obelzeichnen (Tenth Gift-Drawing)}~1879-80$ paper,

dimension unknown

lender unknown

ARTIST UNKNOWN

Exercise for preliminary course taught by Inge Drukrey, n.d. paper on board, dimension unknown Yale University Library

ARTIST UNKNOWN

Exercise for preliminary course taught by Inge Drukrey, n.d. paper on poard, Dimension Unknown

The University of the Arts in Philadelphia

ARTIST UNKNOWN

Exercise for preliminary course taught by Inge Drukrey, n.d. plaka on board, dimension unknown
The University of the Arts in Philadelphia

ARTIST UNKNOWN

Exercise for preliminary course taught by Inge Drukrey, n.d. plaka on board, dimension unknown
The University of the Arts in Philadelphia

ARTIST UNKNOWN

Exercise for preliminary course taught by Inge Drukrey, n.d. plaka on Board, dimension unknown
The University of the Arts in Philadelphia

WILS EBERT, German (1909-1979)

Exercise for preliminary course taught by Josef Albers, 1929 steel wire, bent and welded Height: 7 1/2"; Diam.: 7 1/2 inches Stiftung Bauhaus, Dessau, Germany

ARTIST UNKNOWN

Photo of 30 St Mary Axe London, Foster and Partners, 2007 8 x 10 inches space-frame construction
Foster and Partners, London

R. BUCKMINSTER FULLER, American

Model for Geodesic Dome, n.d.

welded steel frame,

dimension unknown

Southern Illinois University, Collection of R. Buckminster Fuller

ARMIN HOFMANN, Swiss (1920-)

Untitled

From Graphic Design Manual: Principles and Practice

ink on paper

9 x 9 inches

Yale University Library

WINSLOW HOMER, American (1836-1910)

Blackboard, 1877

watercolor

19 1/2 x 12 1/8 inches

The National Gallery of Art, Washington, D.C.

JOSEPH, MYERS & COMPANY LONDON

The Cork Model Maker (English variant of the nineteenth gift), 1855

cork and wire,

dimension unknown

lender unknown

FANNIE E. KACHLINE

Folded beauty forms, 1880

grey and white paper,

dimension unknown

lender unknown

VASILY KANDINSKY, Russian (1866–1944)

Drei Gebogene, die sich in einem Punkt treffen (Three curves meeting at a single point). Analytical drawing after photograph of the dancer Gret Palucca by Charlotte Rudolph, ca. 1925

ink on tracing paper

7 5/8 x 6 1/8 inches

Kupferstich-Kabinett, Staatliche Kunstsammlungen Dresden

MILTON BRADLEY COMPANY, American

First Gift Balls, 1898

yarn and cork,

Quantity 6, 1 x 1 inches

Carondelet Historical Society, Saint Louis

MILTON BRADLEY COMPANY, American

Bradley's Kindergarten Material – Second Gift, 1898

wood

9 x 6 x 3 inches

Carondelet Historical Society, Saint Louis

MILTON BRADLEY COMPANY, American

Bradley's Kindergarten Material - Third Gift, 1898

wood

3 x 3 x 3 inches

Carondelet Historical Society, Saint Louis

MILTON BRADLEY COMPANY, American

Bradley's Kindergarten Material – Fourth Gift, 1898

wood

3 x 3 x 3 inches

Carondelet Historical Society, Saint Louis

MILTON BRADLEY COMPANY, American

Bradley's Kindergarten Material – Fifth Gift, 1898

wood

4 x 4 x 4 inches

Carondelet Historical Society, Saint Louis

MILTON BRADLEY COMPANY, American

Bradley's Kindergarten Material – Sixth Gift, 1898

wood

6 x 6 x 6 inches

Carondelet Historical Society, Saint Louis

MILTON BRADLEY COMPANY, American

Bradley's Kindergarten Material - Seventh Gift, 1870

wood

2 x 6 x 4 inches

Carondelet Historical Society, Saint Louis

MILTON BRADLEY COMPANY, American

Bradley's Kindergarten Material - Ninth Gift, 1898

wood

2 x 6 x 4 inches

Carondelet Historical Society, Saint Louis

MILTON BRADLEY COMPANY, American

Bradley's Kindergarten Material – Thirteenth Gift, 1930

colored paper,

4 x 4 inches

Carondelet Historical Society, Saint Louis

KONRAD PÜSCHEL1907-1997

 $\label{thm:exercise} \textit{Exercise for preliminary course taught by Josef Albers}, 1926-27$

folded paper 9 13/16 x 9 13/16 inches

Stiftung Bauhaus Dessau

FRITZ SCHLEIFER, 1903-1977

Poster for the 1923 Bauhaus Exhibition, 1923

lithograph on paper 39 3/8 x 28 ¾ inches

Collection Merrill C. Berman

MONICA BELLA ULLMANN (LATER BRONER), 1905-1993

Exercise for preliminary course taught by Josef Albers, 1929-30

cut-and-pasted patterned wallpaper, glued on cardboard 12 3/16 x 9 inches

Bauhaus-Archiv Berlin

ARTIST UNKNOWN

 $Beauty forms\ of\ the\ third\ gift, Plate\ 5,$

Die Pädagogik des Kindergartens by Friedrich Fröbel 1862,

folded leaves of plates: ill., 4 inches Indiana University, Bloomington, IN

ARTIST UNKNOWN-KINDREGARTNER

Paper folding Album, 1875

colored paper

4 x 4 inches

Lender Unknown

ARTIST UNKNOWN

Untitled, Des Peres School St. Louis Missouri 1875

photograph

8 x 10 inches

Carondelet Historical Society, Saint Louis

ARTIST UNKNOWN

Untitled, New York Kindergarten 1899

photograph,

dimension unknown

The New York Public Library, Miriam And Ira D. Wallach Division Of Art Prints And Photographs

ARTIST UNKNOWN

House 1877

From The Kindergarten Guide, Maria Kraus-Boelte And John Kraus 9 inches University of Florida, Gainesville

ARTIST UNKNOWN

Bath 1877

From The Kindergarten Guide, Maria Kraus-Boelte And John Kraus 9 inches University of Florida, Gainesville

FRANK LLOYD WRIGHT

Frederick C. Robie House 1906 Sepia 22 x 35 inches Frank Lloyd Wright Foundation, Scottsdale

Larkin Company Administration Building 1902 Sepia 14 x 12 inches Frank Lloyd Wright Foundation, Scottsdale

WERNER ZIMMERMANN/PAUL REINDL (?)

Exercises for preliminary course taught by Josef Albers, 1929

Photograph: Erich Consemüller Gelatin silver print, Each: 4 1/2 x 6 inches

The Josef and Anni Albers Foundation, Bethany, Conn.

PRESS RELEASE May 1, 2014 *** FOR IMMEDIATE RELEASE ***

New Eyes.

BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education, on view at the Mildred Lane Kemper Art Museum June 6 to Sept. 14, 2014, brings together more than 60 works by 39 artists, dating from the late 1880's to today. BLOCKS, focuses on exploratory educational practices that emerged in the nineteenth century and came to replace French Beaux-Arts educational ideas.

Included are works by Frank Lloyd Wright, Buckminster Fuller, Josef Albers, John Hejduk, Johannes Itten, Armin Hofmann, Rob Roy Kelly, Inge Druckrey, and work of many unnamed students.

The exhibition is divided by four time periods — 1836 to 1900 Frank Lloyd Wright's Childhood" — Embodying the rethinking of education that came at the end of the Enlightenment, Frank Lloyd Wright's *BLOCKS* exemplify new strategies for using the eyes to explore the world at our fingertips. The object lesson became the method for training the mind through the eyes and hands. 1917 to 1933 The Bauhaus: The Adolescence of the Modern Movement — The self-contained play bears the fruit of useful investigation for the practically minded. 1937 to 1960 The Second Wave of Middle-Age — Settling down in America, formal investigation is embraced by the Academy as an effective way to teach, as it had been in the kindergarten of Wright's childhood. Refreshed with new talent from Switzerland and Germany formalism sees its greatest impact. 1970 to 1995 Built to last: Weathering Postmodernism — Challenged by the need to connect with people, reductive analysis still provides answers to basic needs for education.

Organized by Eric Koehn, the museum's guest curator, the exhibition is drawn from the collections Bauhaus-Archiv, Berlin; Cooper-Union University, New York; Illinois Institute of Technology; Josef and Anni Albers Foundation, Bethany, Connecticut; Museum of Modern Art, New York; National Gallery of Art, Washington; and Yale University, New Haven.

Catalog

An illustrated catalog accompanies the exhibition, featuring an essay by Eric Koehn, images of all of the works on view, as well as designer interviews and essays from author Ellen Lupton of the Cooper-Hewitt, National Design Museum and architect Joan Ockman. In addition, interactive online interpretations of objects are available at the Kemper website

Mildred Lane Kemper Art Museum

The Mildred Lane Kemper Art Museum, part of Washington University's Sam Fox School of Design & Visual Arts, is committed to furthering critical thinking and visual literacy through a vital program of exhibitions, publications and accompanying events. The museum dates back to 1881, making it the oldest art museum west of the

Mississippi River. Today, it boasts one of the finest university collections in the United States.

Support for *BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education*, was provided by the Sam Fox School, the Graham Foundation and members of the Mildred Lane Kemper Art Museum.

BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education will open with a public reception from 6 to 8 p.m. Friday, June 6, and will remain on view through Sept. 14, 2014. Both the reception and the exhibition are free and open to the public.

At 1 p.m. Saturday, June 14, Robert McCarter architect and faculty member of Washington University Sam Fox School will host a designers' Conversation and gallery walkthrough with early education specialist Louis Lankford.

The Kemper Art Museum is located on Washington University's Danforth Campus, immediately adjacent to Steinberg Hall, near the intersection of Skinker and Forsyth boulevards. Regular hours are 11 a.m. to 6 p.m. Mondays, Wednesdays and Thursdays; 11 a.m. to 8 p.m. Fridays; and 11 a.m. to 6 p.m. Saturdays and Sundays. The museum is closed Tuesdays.

For more information, call (314) 935-4523 or visit kemperartmuseum.wustl.edu.

###

Caption/Credit for attached IMAGE: Artist Unknown, *House*, 1877, lithograph, The Kindergarten Guide, Maria Kraus-Boelte And John Kraus, 9 x 9 inches, University of Florida, Gainesville

-ENDS-

Rachel Bers, Program Director The Andy Warhol Foundation for the Visual Arts 65 Bleecker Street, 7th Floor New York, NY 10012

Subject: Application for Funding

Summary:

The Mildred Lane Kemper Art Museum, part of the Sam Fox School of Design & Visual Arts at Washington University in St. Louis, is committed to furthering critical thinking and visual literacy through a vital program of exhibitions, publications and accompanying events. As part of this mission we are seeking support for our up coming exhibition titled, *BLOCKS: From Frank Lloyd Wright's Childhood to Modern Design Education*. The exhibition will be on view at the Mildred Lane Kemper Art Museum June 6 to Sept. 14, 2014. The exhibition investigates the introductory educational practices that emerged in the nineteenth century and came to be dominant by the end of the 20th, bringing together more than 60 works by 39 artists, dating from the late 1880's to today.

The estimated total cost of our programming is \$120,000. Of this amount we estimate loans and exhibition development will cost \$90,000. Administrative and marketing costs will make up the balance. Therefore, we are requesting \$90,000 in support.

Our Institution

The Mildred Lane Kemper Art Museum has the institutional experience needed to put on this ambitious exhibition and is looking for a funding partner. Our current partners include the Sam Fox School of Design & Visual Arts, providing educational expertise and in-kind administrative support. In addition, \$40,000 in external funding has been secured from the Graham foundation.

The Mildred Lane Kemper Art Museum has presented tightly focused exhibitions and programming with an international significance for the scholarship of design history for many decades. As an extension of our university research and educational mission in design and the fine arts, this exhibition's investigation of the history of design education is an opportunity to impact a diverse community by engagement with objects and ideas of

importance to art and design history and educational programming. Your participation will make our programming is comprehensive as possible.

Object loans

We are being joined in this exhibition by a number of strong lending partners in our effort to bring together the most significant objects of this history. These institutions provide great depth in their collections with which to support the project: Bauhaus-Archiv, Berlin; Cooper-Union University, New York; Illinois Institute of Technology; Josef and Anni Albers Foundation, Bethany, Connecticut; Museum of Modern Art, New York; National Gallery of Art, Washington; and Yale University, New Haven.

With your assistance we will be able to secure the loans of such critical artists to this history as: Frank Lloyd Wright, Johannes Itten, Josef Albers, Buckminster Fuller, Armin Hofmann, John Quentin Hejduk, Rob Roy Kelly, Inge Druckrey, and the work of many unnamed students.

Our lending costs are detailed in the included budget outline. The all-inclusive estimate totals \$62,000.

A purchase grant from the Sam Fox School the Kemper has already secured many important objects for the exhibition and its permanent collection. St. Louis being the site of the first publicly funded kindergarten in the country, made this acquisition in important step in preserving this history.

Catalog

An illustrated catalog accompanies the exhibition. The scholarship in the catalog will be provided by the curator and two other well-regarded scholars. Curator Eric Koehn will provide an overview of the exhibition and history. Joan Ockman, architect, Columbia University, editor of, *Architecture School: Three Centuries of Educating Architects in North America*, provides the essay titled *The Roots of John Hejduk's Nine Square-Grid*. Curator of contemporary design at Cooper-Hewitt, National Design Museum, Ellen Lupton's essay *We're All Swiss Now* discusses design education in Switzerland after the Bauhaus. In addition to these essays, a chapter titled *The Book of Lesson Plans* will be

included. We feel this chapter is an important project that requires him additional scholarship and support.

Our catalog development costs are detailed in the included budget outline. The all-inclusive estimate totals \$15,000.

Education programs

Professional Development

An important part of the story of design education is the passing of ideas from one educator to another. Our exhibition programming focuses on professional development. Four three-hour workshops will be conducted for K-12 teachers. All four programs will be taught in partnership between a Sam Fox School faculty member and endowed professor early-education specialist Louis Lankford. The programs will include the nine square-grid problem, basic drawing, basic design, and basic sculpture.

Our education programing costs are detailed in the included budget outline. The all-inclusive estimate totals \$8,000.

Self-Guided

Self-guided interactive interpretive-programing, provided online and on-site, will give visitors the opportunity to see the relationship between the objects in the exhibition and issues of spatial learning that are typically seen within the context of the profession of psychology. This programming draws a natural connection between the arts and sciences. A series of 15 games will be developed in a partnership between game development company Simutronics Corp. and Washington University's cognitive psychology lab under the direction of Cheryl Wassenaar, associate professor of the Sam Fox School.

Our interactive programing costs are detailed in the included budget outline. The all-inclusive estimate totals \$15,000.

Mildred Lane Kemper Art Museum

The Mildred Lane Kemper Art Museum, part of Washington University's Sam Fox School of Design & Visual Arts, is committed to furthering critical thinking and visual literacy through a vital program of exhibitions, publications and accompanying events.

The museum dates back to 1881, making it the oldest art museum west of the Mississippi River. Today, it boasts one of the finest university collections in the United States.

Eric Koehn Marilu Knode FA12-ANTHRO6139 December 6, 2012

The following questions and responses were developed in conversation during two face-to-face interviews conducted at Washington University in St. Louis, Mo. with Peter MacKeith, adjunct associate curator of architecture & design at the Mildred Lane Kemper Art Museum and associate dean and associate professor of architecture at the Sam Fox School of Design & Visual Arts. The interviewer has paraphrased his responses.

- Considering the importance of the Bauhaus basic course to design history, have you considered doing a museum exhibition organized around the history of design education?

 He has not considered this topic for an exhibition, however, Joan Ockman, Visiting Lecturer at Columbia University's Graduate School of Architecture, Planning, and Preservation; edited Architecture School Three Centuries of Educating Architects in North America. The book may shed light on ways to discuss the topic.
- 2. Is there a reason why a show like this has never been done? Are the objects not available or not interesting?

 The history broadly speaking is not formally compiled.
- 3. Do you know if this exhibit has been done, but maybe outside of the U.S., perhaps in Europe?
 Perhaps the Architectural Association School of Architecture–London or Eidgenössische
 Technische Hochschule (ETH), Zürich has handled this topic in an exhibition.
- 4. Does the Sam Fox School keep examples from its history of design education?
 Examples can be found in accreditation visit reports. These reports are kept for a only short time in school publications and library archives.

- 5. Can you identify an expert on the pedagogy of basic design education?
 - Robert McCarter, Professor of Architecture at the Sam Fox School of Design & Visual Arts, Washington University, possesses a depth of knowledge on the topic.
 - John Hejduk (1929–2000), Dean of Cooper Union's School of Architecture from 1975 to 2000 used the 1971 MoMA exhibition and publication "Education of an Architect: The Cooper Union School of Art and Architecture, 1964-1971" to outline the pedagogy at Cooper Union. Hejduk was also a member of the "Texas Rangers" at the University of Texas School of Architecture in Austin, Texas, from 1951 to 1958. The Texas Rangers were a group of architects that became influential with their training of novice architecture students by concentrating design questions into formal abstractions using the Nine Square Grid Problem.
 - Donald Schön author of *The Reflective Practitioner*, 1983 may also lend insight.
 - Oren Safdie's 2003, well-received one-act-play, *Private Jokes*, *Public Places*, dramatizes the psychological environment of the critique.
- 6. How well do you know the chronology of design teaching exercises, starting with Froebel in the nineteenth century and moving on through the Bauhaus and then on to contemporary practice?
- 7. While habits of teaching were passed on informally through the twentieth century, the practices of education are believed to have remained essentially stable. Of note, The Sam Fox School is currently forming an MA program in architecture education.
- Are the lessons for design education in architecture passed down in any formal way?
 No.
- 9. To what degree are you aware of direct links from the teaching of Josef Albers at Yale to the architectural teaching there? My understanding is that most of his influence was with the fine arts and graphic design.
 Josef Albers and Louis Khan became close associates as their offices were in close

physical proximity at Yale. They did share pedagogical ideas as described in an essay by Washington University faculty member Robert McCarter.

10. Rob Roy Kelly, formally at Arizona State University, is known for keeping in depth records of his lesson plans. Are you familiar with him or do you know any Architects that have kept similar records to Kelly's of his pedagogy?

MacKieth is not familiar with Rob Roy Kelly, however is a lot of writing about professional design process in architecture. One well-known example is Alvar Aalto's 1947 essay "The Trout and the Stream." Another example is legendary story of Frank Lloyd Wright's quick execution of his design for Fallingwater. Both narratives illustrate the development of a design after a period of subconscious gestation.

11. How many objects can the Caren Gallery hold in an exhibition?

The current exhibition has sixty objects; it is more common to have a much smaller number.

Blocks From Frank Lloyd Wright's Childhood to Modern Design Education

1 Project Name: 2 Artist(s): 3 Curator: Eric Koehn 4 Exhibit Dates: 6/6-9/14, 2014

| 5 | DESCRIPTION | COST | INTERDOM- | LOCAL |
|--------|--------------------------------------|------|-----------------|-------|
| 6 7 | LOANS / ARTWORK | | | |
| 8 | Exhibition Shipping - Incoming | י | 27,000 10-25-25 | |
| 9 | Exhibition Shipping - Outgoing | - | 27,000 10 20 20 | |
| 10 | Crating | - | 12,000 10-25-25 | |
| 11 | Customs Brokerage | - | 1200 | 2 |
| 12 | Exhibit Storage | | | _ |
| 13 | Conservation / Restoration | | 5000 3-5-10 | |
| 14 | Couriers / Mandated Crew | | | |
| 15 | Airfare | | 4000 2-2 | |
| 16 | Ground Transportation | | 700 | |
| 17 | Hotel Accommodations | | . • • • | |
| 18 | Couriers / Mandated Crew Fees | | 2000 2-2 | |
| 19 | Per Dien | | 150 2—2 | |
| 20 | Exhibition Renta | | | |
| 21 | Exhibition Insurance | | 10000 | |
| 23 | TOTAL LOANS/ARTWORK | | | 62050 |
| 24 | TO THE ESTATOMATIVOTA | ` | | 02000 |
| 25 | CREATIVE SERVICES | | | |
| 26 | Artist Fees | 3 | | |
| 27 | Artist Materials Fee | | | |
| 28 | Guest Curatorial Fee | | | |
| 30 | TOTAL CREATIVE SERVICES | | | 0 |
| 31 | TOTAL CITEATIVE SETTIOES | , | | U |
| 32 | TRAVEL (EXHIBITIONS) | | | |
| 33 | Curatorial / Administrative: | | | |
| 34 | Airfare | | 2400 | |
| 35 | Ground Transportation | | 300 | |
| 36 | Hotel Accommodations | | 1790 | |
| 37 | Per Diem | • | 325 | |
| 38 | 1 01 210111 | | 020 | |
| 39 | Artists: | | | |
| 40 | Airfare | | | |
| 41 | Ground Transportation | | | |
| 42 | Hotel Accommodations | | | |
| 43 | Per Diem | | | |
| 44 | | | | |
| 45 | Registrar: | | | |
| 46 | Airfare | | 2400 | |
| 47 | Ground Transportation | | 300 | |
| 48 | Hotel Accommodations | | 1500 | |
| 49 | Per Diem | - | 325 | |
| 51 | TOTAL TRAVEL (EXHIBITIONS |) | | 9340 |
| 52 | | , | | 00.0 |
| 53 | RESEARCH / DEVELOPMENT | | | |
| 54 | Books - R&D |) | 800 | |
| 55 | Publications - R&E | | 600 | |
| 56 | Photocopies - R&E | | 100 | |
| 57 | Interview / Transcription Fees - R&D | | 2000 | |
| 59 | TOTAL RESEARCH / DEVELOPMENT | | | 3500 |
| 55 | TO THE REDEMINION DEVELOR WILING | • | <u> </u> | 5500 |

| 60 61 | INSTALLATION | | |
|-------------------|----------------------------------------------|------|-------|
| 62 | Salaries - Part Time | 1600 | |
| 63 | Overtime | 600 | |
| 64 | Installation Materials | 000 | |
| 65 | motanatori materiale | | |
| 66 | Graphics: | 3000 | |
| 67 | Title /Credit Wall | | |
| 68 | Wall Texts | | |
| 69 | Object Labels | | |
| 70 | Quotes / Other Graphics | | |
| 71 | | | |
| 72 | Translator | | |
| 73 | Equipment Purchases / Rental | | |
| 74 75 | Vitrines / Pedestals | 1600 | |
| 75 77 | Miscellaneous - installation | 300 | 4400 |
| 77 | TOTAL INSTALLATION | | 4100 |
| 78 79 | CATALOG / BROCHURE | | |
| 80 | Essayists | 5000 | |
| 81 | Photographer | 900 | |
| 82 | Catalog Designer | 2000 | |
| 83 | Catalog Editor | 800 | |
| 84 | Rights and Reproduction Fees | 1900 | |
| 85 | Translation Services | 800 | |
| 86 | Scans - Catalog / Brochure | | |
| 87 | Catalog / Brochure Printing | 2500 | |
| 88 | Catalog / Brochure Shipping | | |
| 89 | Customs Clearance | | |
| 91 | TOTAL CATALOG/BROCHURE | | 13900 |
| 92 93 | INVITATION | | |
| 94 | Invitation Designer | 1200 | |
| 95 | Printing Invitations | 700 | 70 |
| 96 | Invitation Scans | | |
| 97 | Mailing Services | | |
| 98 | Postage /Bulk Mail | | |
| 99 | Premier Members Insert | | |
| 101 | TOTAL INVITATION | | 1900 |
| 102 | | | |
| 103 | PUBLIC RELATIONS / MARKETING | 2000 | |
| 104 105 | Advertising / Promotion Billboard | 3000 | |
| 106 | Signage / Banners | | |
| 107 | Photographer | | |
| 108 | Press Packets | | |
| 109 | Salaries - Part Time | | |
| 110 | Contractual Agency Outsourcing | | |
| 111 | Press Preview | | |
| 112 | Web Component | 5000 | |
| 114 | TOTAL PR / MARKETING | | 8000 |
| 115 | | | |
| 116 | OPENING | | |
| 117 | Food / Beverage Purchases | 1200 | |
| 118 | Museum Opening Entertainment | | |
| | Colorina Dort Lima | | |
| 119 | Salaries - Part Time | | |
| 119 120 122 | Miscellaneous - Museum Opening TOTAL OPENING | | 1200 |

| 123 | | |
|------------|--------------------------------------------|---------|
| 124 | EDUCATION | |
| 125 | Lecturers: | |
| 126 | Artist/ Lecture Fees | 300 |
| 127 | Airfare | 400 |
| 128 | Hotel Accommodations | 300 |
| 129 | Ground Transportation | 200 |
| 130 | Per Diem | |
| 131 | A 11 11 OL 11 | |
| 132 | Activity Stations | |
| 133 | Reading / Reference Areas | |
| 134 | Salaries - Part Time - Gallery Guides | |
| 135 | Teacher's Guides | |
| 136 | Docent Material | |
| 137 | Artist Honorarium | |
| 138 | Workshops | |
| 139 | Large-type Translations | |
| 140 | Signed Interpreters | |
| 141 | 5 | |
| 142 | Postcards/Fliers: | 000 |
| 143 | Postcard Design | 200 |
| 144 | Printing - Postcards | 100 400 |
| 145 | Mailing Services | 85 500 |
| 146 | Postage /Shipping | |
| 148 | TOTAL EDUCATION | 1585 |
| 149 | | |
| 150 | SECURITY | |
| 151 | Extra Security Costs - Protection Services | |
| 152 | Extra Security Costs - Police | |
| 154 | TOTAL SECURITY | 0 |
| 155 | | |
| 156 | COMMUNITY DEVELOPMENT | |
| 157 | Exhibition Committee | |
| 158 | Artist's Breakfast | |
| 159 | Development Events | |
| 160 | Donor / Lender Event | |
| 161 | Donor / Lender Books - Materials | |
| 162 | Donor / Lender Books - Mailing | |
| 164 | TOTAL COMMUNITY DEVELOPMENT | 0 |
| 165 | | |
| 166 | ADMINISTRATIVE / OVERHEAD | |
| 167 | Postage | |
| 168 | FedĔx | |
| 169 | Courier Services | |
| 170 | Office Supplies | 400 |
| 172 | TOTAL ADMINISTRATIVE / OVERHEAD | 400 |
| | | 100 |
| 173 | | |
| 173 174 | | |