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DISCOVERY

A Visual Arts
Elementary School

Cindy Perdomo

MFA in Interior Design

Spring 2023

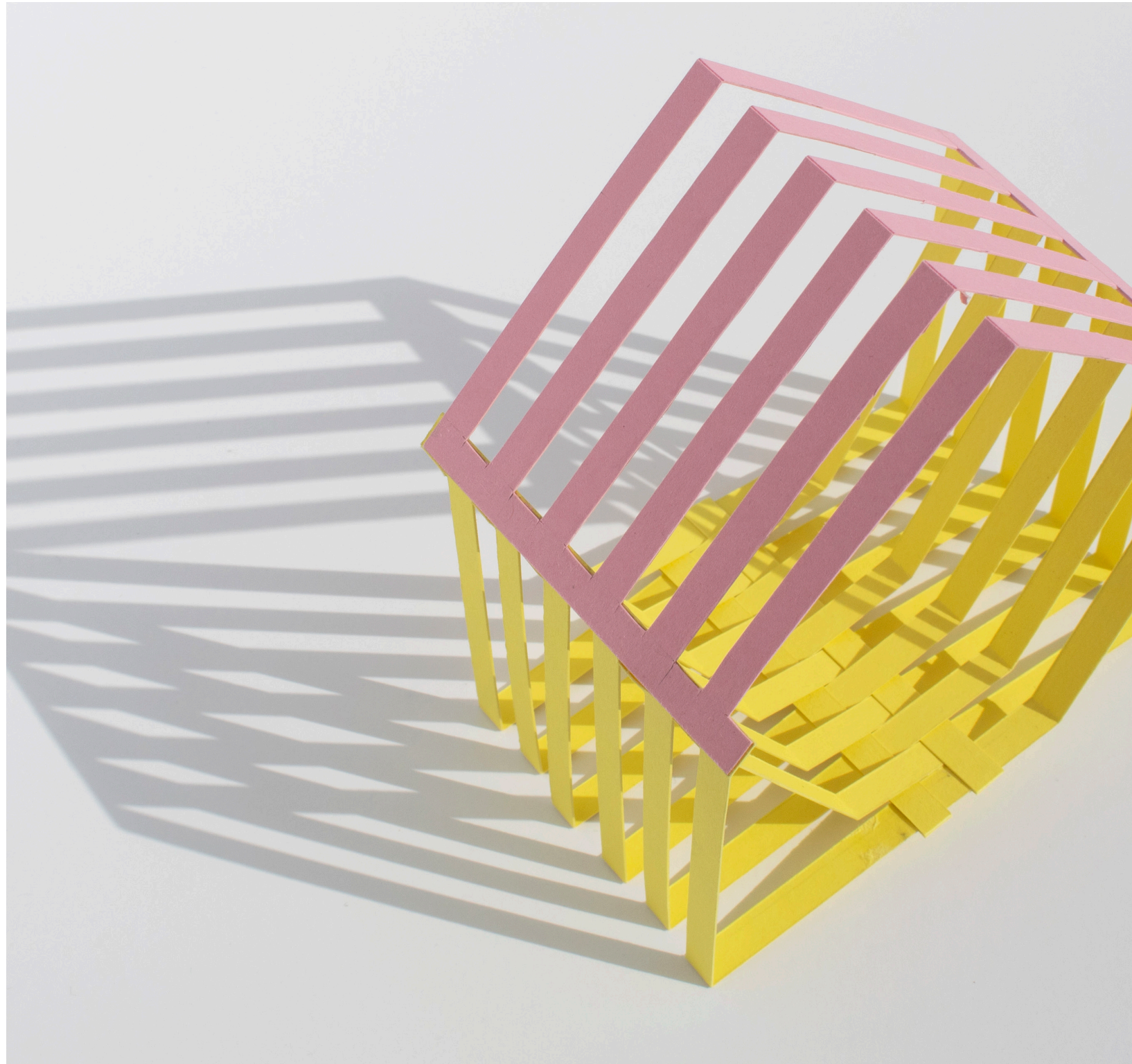


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RESEARCH



ABSTRACT

On average, school-age children spend more time in the classroom environment than they do at home. Why not provide environments that stimulate children's curiosity to learn through visual arts? Including visual arts in educational programs can enhance students' cognitive development, problem-solving abilities, cultural awareness, and critical thinking skills.

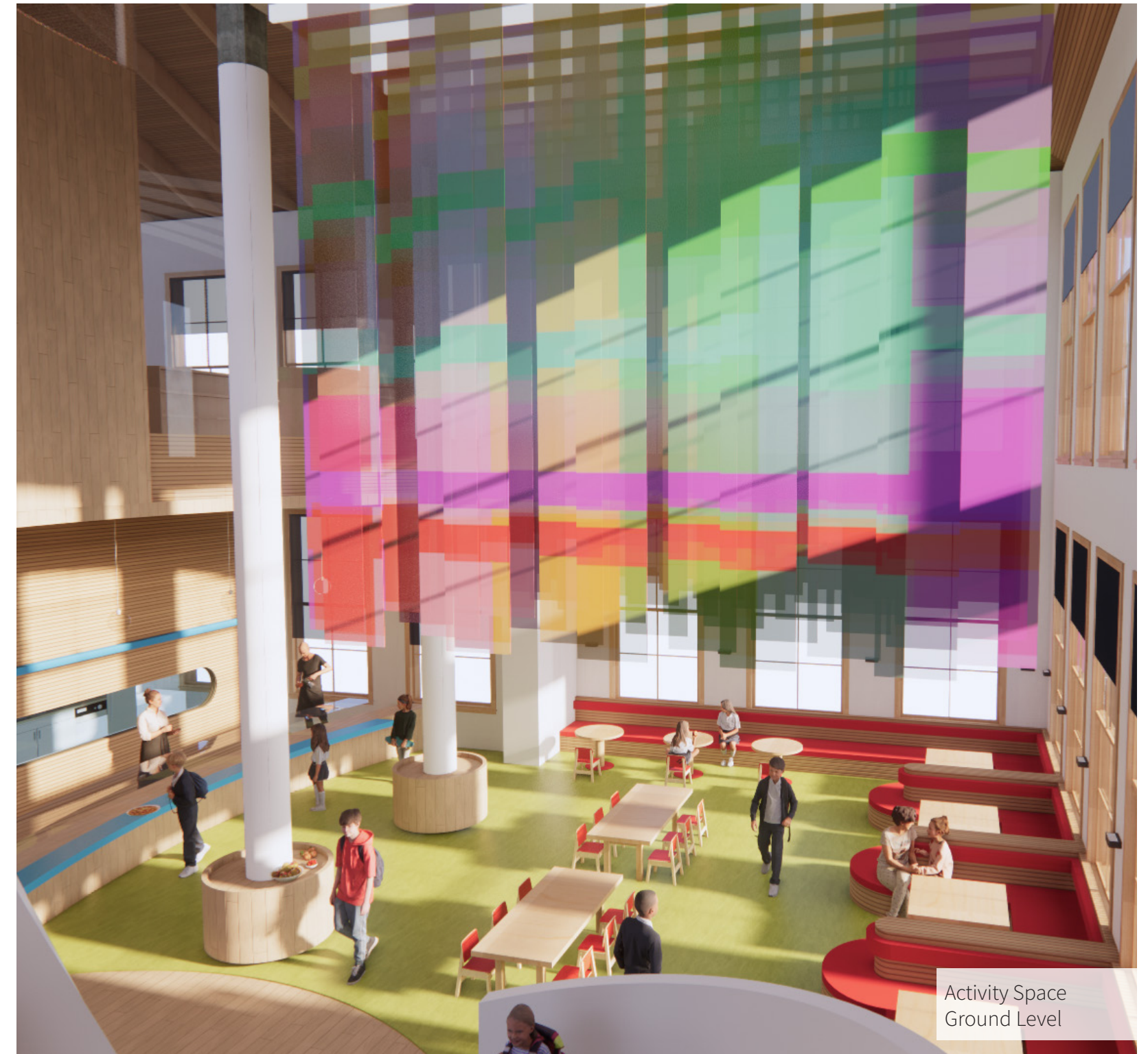
As someone who has attended various public schools in Florida, I've found that incorporating arts education into the curriculum can enhance students' overall engagement with learning. Unfortunately, many students lack access to arts education due to a lack of funding and resources. Traditionally, the arts have been viewed as an opportunity for creative expression and separated from "real" learning like math, science, and English.

However, multiple case studies have shown that incorporating visual arts into education can lead to better learning outcomes. For example, one compelling program called MASE integrates visual arts with geometry, allowing students to creatively solve problems while learning about both topics.

Therefore, I propose designing an elementary school that prioritizes arts education in its curriculum. The first five years of a child's development are crucial, providing a foundation for social-emotional and physical development. Children are tactile learners, and research has shown that the number of tactile receptors in the fingertips gradually decreases after the age of ten. By designing a space that prioritizes the arts, students will appreciate the benefits of creativity in their education.

Activities like drawing, painting, and working with ceramics provide effective methods of communication for children. They allow children to express their opinions and beliefs to adults using visual media. Additionally, these activities help children connect what they learn to various contexts, make connections with prior knowledge and everyday experiences, and acquire new knowledge in more meaningful ways.

In conclusion, incorporating visual arts into education can have significant benefits for students. By prioritizing arts education in a school's curriculum, we can help students develop crucial skills while encouraging creativity and self-expression.



Activity Space
Ground Level

DESIGN ETHOS

Great design should intrigue curiosity, creativity, and communication among people.

As designers, we have a moral obligation to design spaces that improve our health and well-being. We spend the majority of our lives indoors, and we have the full capacity to create an environment that will lend itself to a more fulfilling life.

Our surroundings are a physical representation of what is going on inside. If our environment is in chaos, so is the person using the space. If our environment is organized, this will reflect amongst the users in the space.

As designers, it is crucial to create spaces where people feel safe and comfortable with their surroundings.

Design should have rhythm and beauty.



India Mahdavi is a French designer originally from Iran who has lived in Germany, the United States, Iran, and France. Much of her inspiration comes from her multicultural background. She has a great use of color and pattern that makes her spaces unique and inspiring. I find her work incredibly inspirational because she is not afraid to play with color. She also designs furniture pieces that are out of the ordinary. In one of her recent projects, she collaborated with Yinka Shonibare on the design for Sketch, a restaurant in London. Yinka Shonibare is a British-Nigerian artist who makes art that explores cultural identity, colonialism, and post-colonialism.

Daniel Sanderson is a London-based architect who studied film and architecture. He works on residential projects based in the UK and designs furniture for his interiors. His work is characterized by his use of materials. He incorporates outside materials and plants into his buildings. He uses a lot of wood, brick, concrete, and quarry tiles, which are typically associated with the outdoors. Sanderson incorporated natural elements of the original building in his design. For his furniture designs, he uses traditional woodworking techniques and locally sourced materials. I find his work to be refreshing and calm. He uses a lot of natural light, and I appreciate how he incorporates repetition throughout the space.

Minima is a minimalist interior organizing space in Richmond, VA. Kristen Ziegler, the owner, studied Architecture from Virginia Tech and started Minima in 2010. What I find inspiring in the spaces that she designs is creating order within chaos. She works directly with the client on their belongings by customizing organization methods that will benefit the user of the space.

Snøhetta is an international architecture, landscape architecture, interior design, product design, and graphic design office based in Oslo, Norway. “Our work strives to enhance our sense of surroundings, identity, and relationship to others and the physical spaces we inhabit.” One of their projects that I find interesting is the Summit, a social furniture product that was made in 2021. “Built on the idea that one needs intimacy to share and connect with others.” This furniture piece is essentially a tool for social interaction, play, and rest. The sofa pieces can be modified depending on the activities taking place. This work is inspiring because they are thinking about all of the factors that come into designing furniture, not just the act of sitting but socialization, mobility, and materiality.

Patkau Architects is an architecture and design research studio based in Vancouver, Canada. The Temple of Light is a spiritual sanctuary and meeting place for the Yasodhara Ashram in Kootenay Bay, BC. The remote temple is located within the forest’s edge overlooking Kootenay Lake from a cliff top. This work is inspiring because it uses unconventional and unexpected architectural forms, materials and construction methods, as well as the idea of contrasting a built object with its surroundings.

RESEARCH EXPANSION

The introduction of arts in early education can be traced back to the time of the ancient Greeks. Philosophers like Plato recognized the inherent value of studying theater, music, dance, and visual arts. For this project, I am focused on incorporating visual arts in early education.

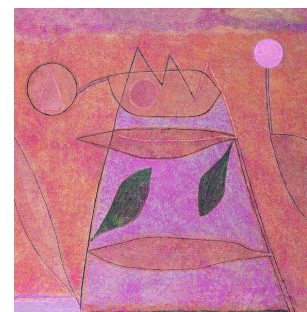
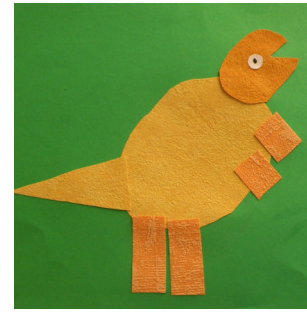
A brief history of American arts education: In 1749, Benjamin Franklin introduced art education in public schools in the United States. Two centuries ago, art in education was uncommon. Rembrandt Peale, an American artist and museum keeper, advocated the importance of visual arts in his 1855 book “Graphics: The Art of Accurate Delineation, a System of School Exercise for the Education of the Eye and the Training of the Hand, as Auxiliary to Writing, Geography, and Drawing.” In this book, he writes about the importance of studying drawing, writing, and typography in schools.

In recent years, the American education system has increased its emphasis on testing in math, science, and language arts, which has forced many school districts to cut funding from arts programming. The arts were at a disadvantage due to the general perception of the arts as nothing more than an extracurricular activity. However, research proves that incorporating the arts promotes positive development in the academic, social, and emotional aspects of students’ experiences in schools.

This paper will discuss the motivation, issues, methods, and conclusions regarding the design of the interior of an arts-integrated elementary school.

Motivation: In my early education, I was introduced to the arts as an elective subject. It was never fully integrated into the curriculum but viewed as an extracurricular activity. It was not until I was accepted into a public magnet art school where I was fortunate enough to compare the academic structure of a school that had arts as electives versus a school that viewed the arts equally to math, science, and English class. This experience motivated me to focus my research on the importance of arts in early education.

No amount of higher education can cancel out what has been formed in infancy. It has been estimated that over 100 billion dendrite connections are formed in the first five years of growth. Dendrites are the structures of neurons, which conduct electrical impulses toward the cell body of the nerve cell. What is perhaps not as well understood is that these same five years are also some of the most critical years with respect to brain development. Forming language, identifying cultural and social norms, and learning to distinguish right from wrong all require intense neurological growth to take place, thus strengthening the connections between neurons. This rapid growth in the minds of young children inspires them to explore, discover, play, and make natural connections between themselves, others, and their surrounding world. Childhood is one of the most



effective periods of human life, in which the human character arises. Therefore, the child not only needs physical care and attention, but also requires social, emotional, and mental education as a determining factor to their overall wellbeing. During the first six years of life children’s brains develop faster than any other time in their lives.

Visual arts can contribute to the development of skills used in everyday life, such as reading, writing, and mathematical calculation. Various art forms allow young children to further develop different cognitive, socio-emotional, and motor skills. Visual arts help children develop critical thinking, self-expression, and emergent literacy skills. They play an important role in the acquisition of key skills such as teamwork, critical thinking and problem-solving abilities, self-discipline, and motivation. Teachers and students engage with the arts in four different types of settings: integrated learning activities, fillers and transitions, learning center time, and art-focused lessons, in which the presence of various art forms considerably differs. Moreover, sufficient research exists to overwhelmingly support the belief that engagement in the arts contributes to enhanced learning throughout all academic areas. The arts enhance the process of learning because the systems they nourish (which include our integrated sensory, attentional, cognitive, emotional, and motor capacities) are, in fact, the driving forces behind all other learning.

Incorporating the arts into integrated learning activities can make learning more stimulating, less rigid and predictable, and expose children to open-ended situations that enhance their creative thinking skills, which are necessary for complex imaginative problem-solving. It is essential to present art from different historical periods and styles, as well as by male and female artists from diverse cultures and ethnicities, in a balanced manner. The curriculum should also include interdisciplinary elements from mathematics, science, literature, and architecture, allowing children to experience communication, discovery, and exploration. Furthermore, it is highly important for children to interact with works of art in environments such as museums and galleries.

Methods: Maria Montessori was an Italian physician, educator, and innovator, acclaimed for her educational method that builds on the way children learn naturally. Some of her teaching methods include creating an environment that facilitates children’s self-directed, persistent, and attentive interest in particular activities. Equally important, the environment should provide occasions to cultivate the self-discipline involved in respect for others, social cooperation, and deliberate submission to legitimate authority. The main goal is to enable children to integrate free thinking into their daily lives, to mentally absorb information rather than memorize isolated facts, to be willing to take risks, and ultimately become leaders with refined ethical and cultivated moral guidelines who take action and are spirited and fierce when going for their desires. Early childhood educational programs focus on empirical education, allowing children to attain and use information by the power of

example and by involving themselves in activities based on imaginative play. The overarching goal is to instill in the child a sense of reverence for the world. Montessori shows, in contrast to many ordinary and philosophical assumptions, that children’s incapacities for autonomy are best understood as due to an absence of adequate external conditions, rather than intrinsic limitations based on their stage of life. Normalization, for Montessori, involves deliberate concentration, self-discipline, active and engaged work, and various forms of sociability. The focus on attention becomes a touchstone of the suitability of an environment for a child’s exercise of their internal capacities for attention and self-direction (SA, p. 119; AbsMind, p. 206). In such environments (and only in such), “the child may live in freedom” (SA, p. 111) and exercise the autonomy of which they are capable.

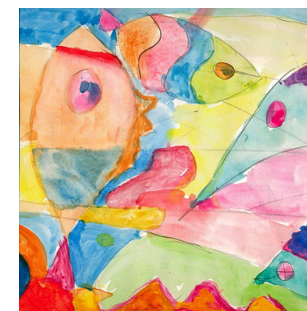
Process-oriented assessment, rather than results-oriented assessment, is necessary in art. In process-based assessment, participation, the relationship between the child and the art activity, and the child’s interaction with materials and other children are all important considerations. Schools should incorporate the arts within integrated learning activities to make learning more stimulating, as well as less rigid and predictable, exposing children to open-ended situations and enhancing their creative thinking skills, which are necessary for complex imaginative problem-solving. The value of participating in the arts during early childhood education is seen as playing, exploring, and expressing, rather than creating finished art products (Menzer, 2015).

Programs that integrate the arts in education

Promoting and Supporting Early Literacy through the Arts (PASELA): Overall, PASELA applied the arts in several ways to support early childhood education and literacy experiences. The program had four layered components, which included developing arts-integrated teaching strategies, creating enriched aesthetic and literacy environments for children and families, promoting creative collaborations among families, artists, educators, and citizens, and utilizing assessment to measure progress.

Ongoing training and supervision were provided during monthly in-service sessions that were 2 hours each, throughout the remainder of the program to expand and enhance learning from the pre-service training. Additionally, a literacy/arts coach provided regular, individualized mentoring and consultation to early childhood education (ECE) staff and artists at all program sites at least twice per month. The artists involved in the program had different specializations, such as visual arts, theater, music, and dance/movement. Throughout the year, all of the residencies were staffed by a total of 10 artists.

Mathematic, Arts, and Creativity in Education (MACE): The program consisted of a series of lessons for fourth, fifth, and sixth-grade students that integrated geometry and visual arts, along with a professional development program for teachers. Results showed that students who received the MACE lesson series improved more than students who received regular geometry lessons only. Non-routine problem-solving is important in elementary school mathematics (Kolovou, 2011). For example, students have to create a paper model of a 12-sided dice, and they cannot simply apply a strategy. Instead, they have to recall, use, and combine facts, skills, procedures, and ideas in a new and meaningful way to solve the problem. The aim of teaching geometry in education is to help students understand and explain geometric phenomena from reality and to order and organize spatial



situations (Jones, 2002; Van den Heuvel-Panhuizen & Buys, 2005), such as drawing a map or reasoning about the effect of the height of the sun on the length of a shadow.

Kaleidoscope: is an innovative approach to an arts-based early childhood program that combines visual arts, music, dance, and language arts. The program’s principal goal is to promote the learning and development of low-income, inner-city children who attend preschool and kindergarten. Visual arts and other knowledge domains (such as music, science, and mathematics) are not treated as separate subject-based disciplines. Instead, they are seen as integrated throughout the early childhood program.

Environments suited for kids

Many adults live in environments suited for their everyday needs, while most children do not. As a result, children tend to be impulsive and undisciplined, either passively submitting to the wills of those around them or wildly following their own impulses. Children’s ‘wills’ are merely the immediate expressions of their passing desires. Montessori shows, in contrast to many ordinary and philosophical assumptions, that children’s incapacities for autonomy are best understood as due to an absence of adequate external conditions, rather than intrinsic limitations based on their stage of life. Montessori first and most basically points out that if children are going to behave freely in their environment, they need an environment that is the right size for them: ‘give the child an environment in which everything is constructed in proportion to himself, and let him live therein. Children also need access to materials that stimulate them to focus on work. For children just as for adults, a world of toys that attract and distract but require no real work cannot engage focused attention and reason responsive activity. Montessori classrooms are deliberately social spaces, which cultivate respect for and solidarity with others. Children are vulnerable and dependent upon adults for the production of an environment that allows them to exercise and cultivate their capabilities. The adult perfects the environment, but the child perfects being itself.

PRECEDENT STUDIES

Loop Kindergarten

SAKO Architects
Tianjin, China
2009

This project was designed by a Japanese architect, Keiichiro Sako, in Tianjin, China, as a kindergarten. The project includes playgrounds, classrooms, and a roof garden. The doughnut-shaped building concept was inspired by the 18 shades that make up the rainbow color palette. The building is three stories high and has classrooms that circulate the perimeter of the building, while the center is used as an open-air courtyard. This project uses a lot of color as a wayfinding tool to help children identify their location. The playrooms on the third floor have access to the roof garden via staircases.

I was drawn to the color and form of the building because of its unconventional design features. I found the exterior to be unique and playful. In comparison to the other projects that I have selected, I found this one to be more experimental. I was drawn to how the columns were used in the play area, since the building that I am working with has columns in the basement.

Critical aspects of the project include color as a wayfinding tool, space planning, and circulation.

The main takeaways are programming, in which the building is divided up by indoor play, academic spaces and outdoor play. Color and lighting also play an important part of the project because the lighting is used in a playful manner.



Internal Courtyard



Internal Courtyard



Outdoor Roof
Play Area



Main Entrance

PRECEDENT STUDIES

Elementary/ Middle School

Tali Design
Taichung City, China
2018

In 2018 Tali redesigned this Elementary/ Middle School as a new way to introduce a classroom in a library setting. A challenging aspect of the project was to weave in a classroom environment within the library. The team decided to create different zones for different activities but continued to design the space with an open concept. The continuous walls of books were used to divide the space into five different areas: the reading area, three classrooms, and a reading corner.

I selected this project because I was attracted to the form of the bookshelves. They are simultaneously sculptural and functional. The materials also work well in the library because people associate wood with warmth, and the grain on the wood adds an additional dimension to the material.

Critical aspects of the project that I investigated include the floor plan, programming, circulation, and interesting storage methods that are accessible for young students.

The main takeaways are using natural materials, repeating the same construction concept throughout the space, expanding the use of one material, and using objects to divide a space.



Main Entry Area



Small Pebble Shelf



Double Side Book Wall



Window Side Reading

PRECEDENT STUDIES

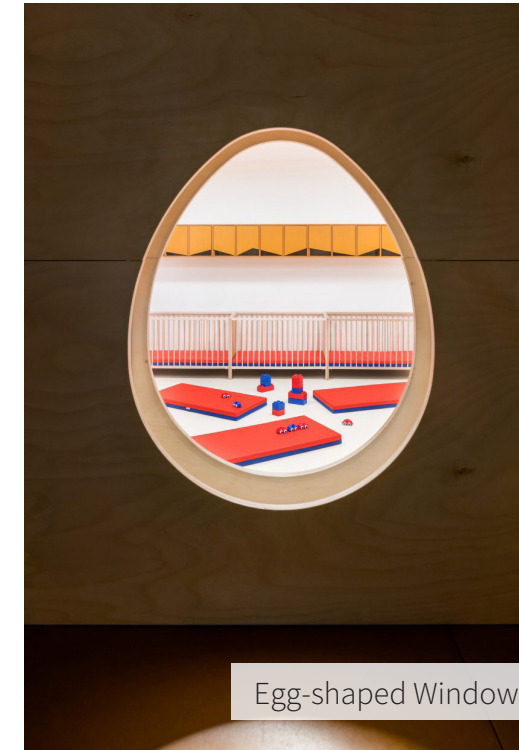
Malvína Day Nursery Prague 2021

Located in the capital of the Czech Republic, Malvin Day Nursery was designed for young children between nine months and two years of age. The team focused on designing elements in the interior that facilitate the drop-off process between the garden and the child, such as incorporating window cutouts, clear sightlines, and allowing children to stand on different step levels in the cloakroom to prevent grandparents from bending over to help them with their coats. The team also incorporated a variety of playful features, such as slides, quiet corners, places to hide, and different levels, so that the kids can feel more in control of their environment. The kitchen is open to the space, enabling children to watch the cooking process, which creates a collective experience.

I selected this space because I was interested in the play area, color palette, and materials used. I found the wall cutout to be interesting, as well as the sophisticated color palette that still maintains a playful atmosphere.

The critical aspects of the project include the kitchen space which is open and accessible to the students. Color is used to highlight important features. Playful lighting is used throughout the space and flexible furniture selection.

The main takeaways from this project are incorporating methods to ease the parent drop-off process, creating different floor levels for playing, using color to highlight important areas, and developing methods to involve children in the cooking process.



Egg-shaped Window



Open Kitchen



Hidden Nooks



Open-plan

SITE



SITE SELECTION



NEIGHBORHOOD HISTORY



Historical Overview

The Fan is a district of Richmond, Virginia, located at the eastern end of the city's West End. This neighborhood is famous for its 85-block-long Victorian-era residential buildings. Starting from N Harrison Street, the district progressively expands and ends at N Belvidere, hence its name, The Fan. This historic neighborhood is embedded with coffee shops, old barbershops, 18th- to 19th-century cathedrals, and corner mom-and-pop spots. The Fan is also home to the Virginia Commonwealth University Campus, which includes academic, residential, and recreational buildings, and serves a total of 28,000 students. Within the residential area of the district, The Fan has multiple pocket parks, which are small and can only be accessed through alleys. These parks are wonderful spaces where children and families can play and connect. The Fan is also one of the most walkable areas in the city.

During the mid-1700s, The Fan was a rural settlement for the Revolutionary troops. The area did not begin to develop until the 1880s, when the middle class emerged during the Progressive Era. By 1930, The Fan had transformed into the distinctive character that is seen today. During WWII, the neighborhood experienced a short period of decline, but then experienced a resurgence in the early 1960s. The neighborhood features a huge variety of architectural styles, from Colonial Revival and Italianate to Tudor, Art Deco, Gothic, Spanish, and Richardson Romanesque. Nearby neighborhoods include the Museum District, Carytown, Randolph, and Byrd Park.

BUILDING HISTORY

10 N Brunswick St
Richmond, VA 23284

This building was formerly known as The Sacred Heart School, which was a public grade-level academic building. The Georgian Revival building was completed on April 1, 1920, by Carneal & Johnston, Architects & Engineers. Established in 1908, the firm of Carneal & Johnston became the most prolific Richmond architectural practice of the twentieth century, producing well over a thousand buildings of greatly varying levels of architectural inspiration. In the early 1990s, Virginia Commonwealth University purchased the building and renovated the basement for its current use.

Today, this building houses the VCU Department of Dance and Choreography studios, where the department uses the space for classes and performances.



Red Brick Detail



Front Facade



East View

SUN + SITE STUDIES



LIGHT STUDIES

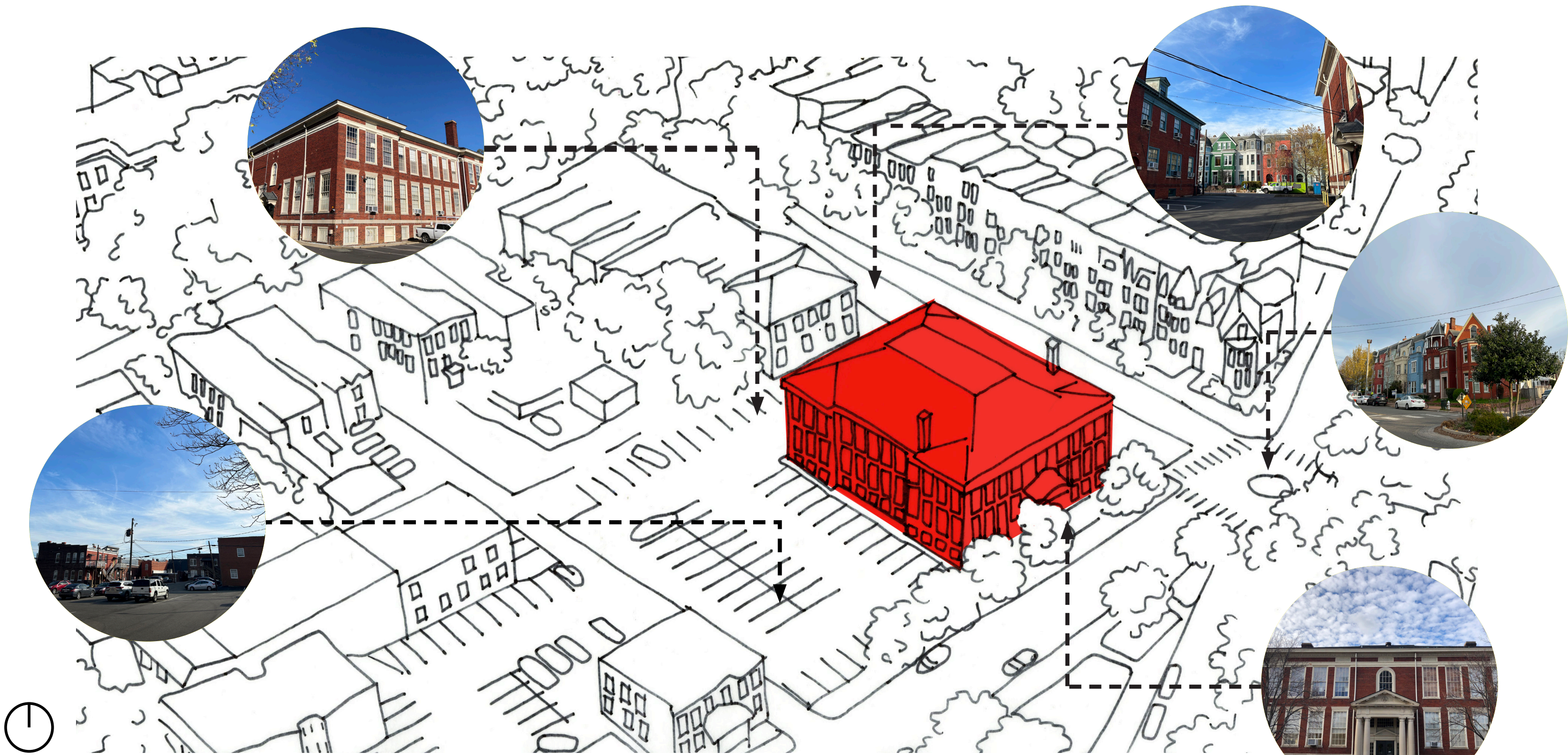


Morning Watercolor Study



Afternoon Watercolor Study

PHOTOGRAPHIC STUDIES



PHOTOGRAPHIC STUDIES

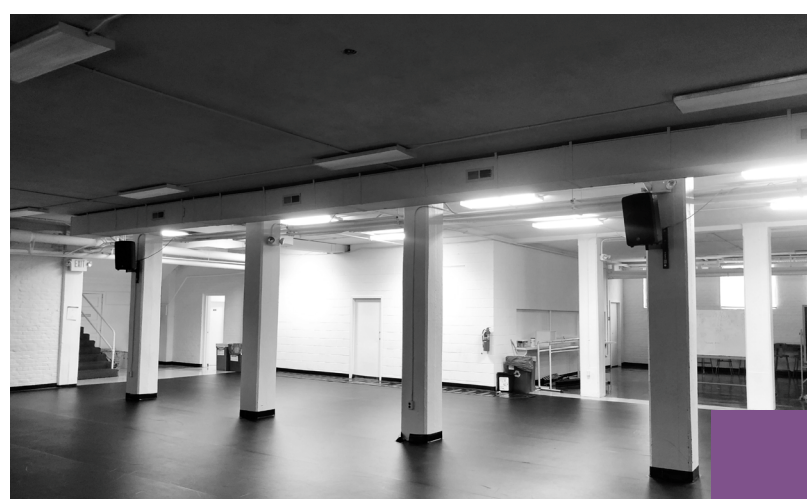
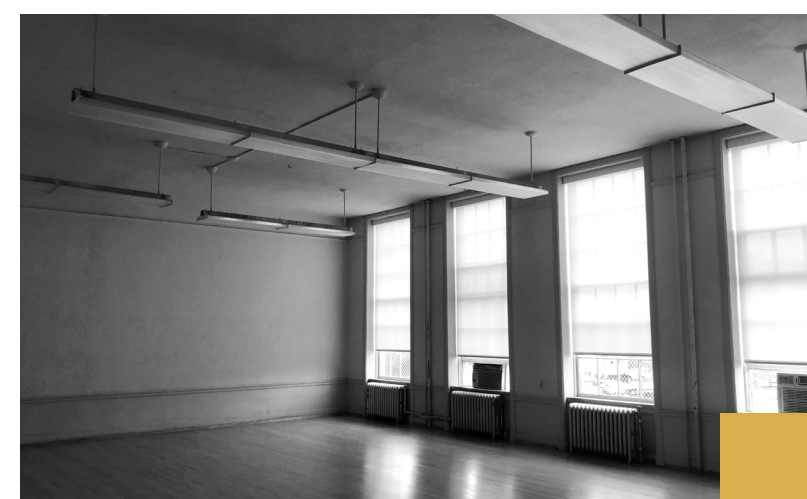
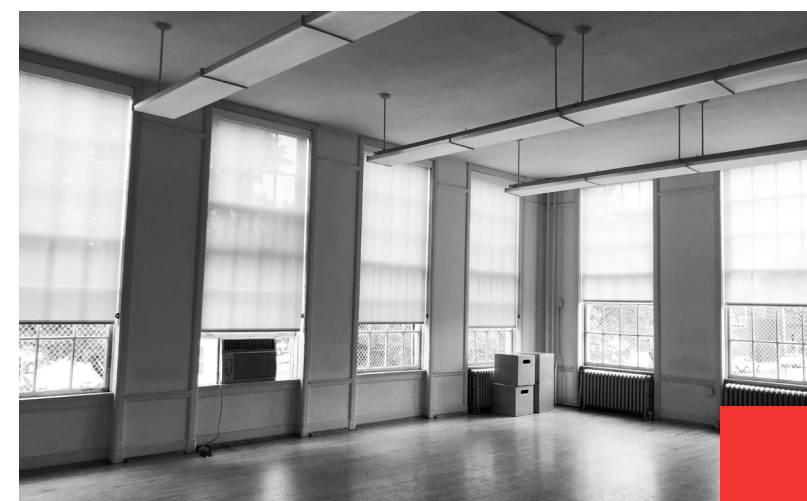


East Facade



North Facade

Each color corresponds to the interior photos displayed to the right.



CONCEPTUAL

PHASE



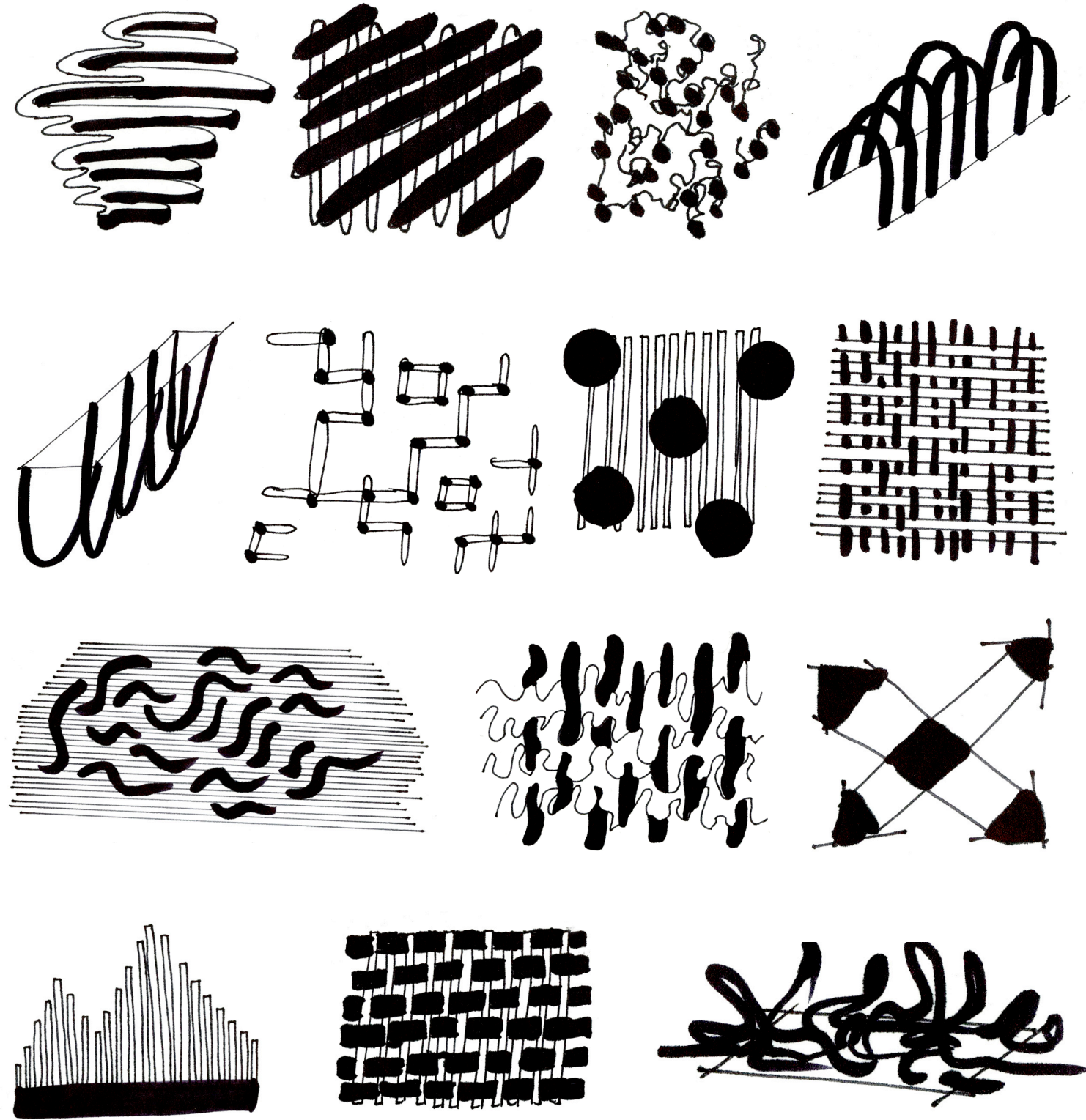
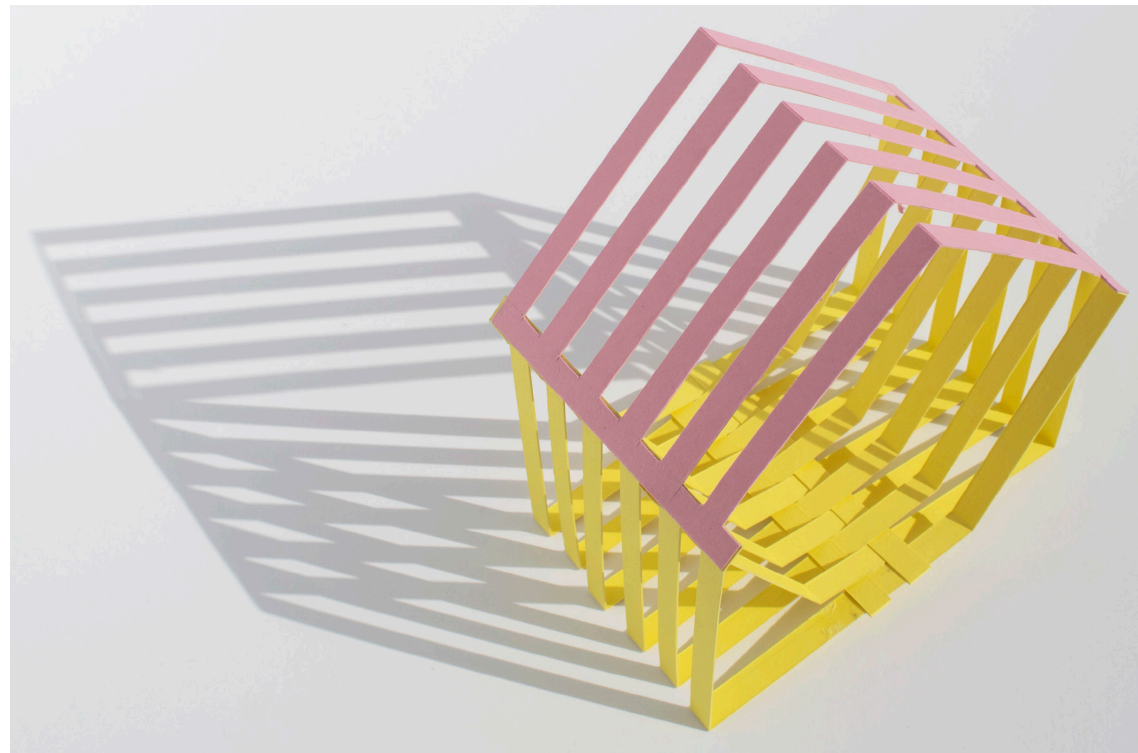
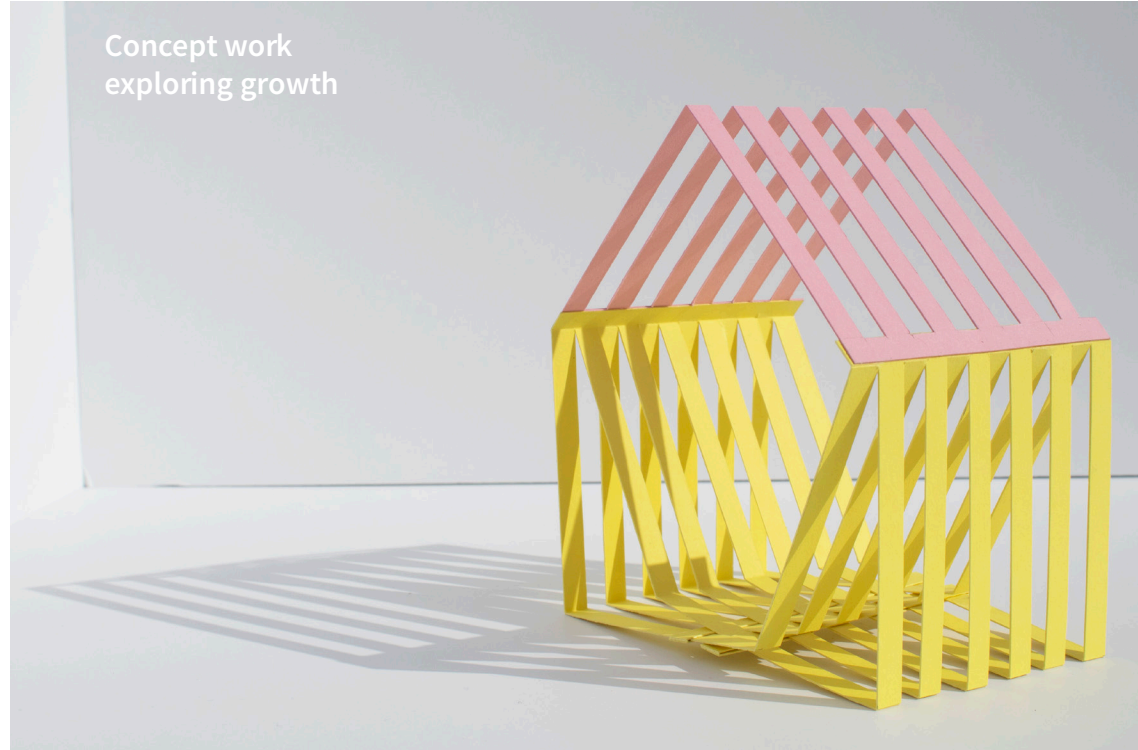
CONCEPT STATEMENT

The Art Elementary School displays elements of exploration through the design of lighting, color, and forms, creating a compelling environment for students to learn and discover. Connection is encouraged through open spaces, displays of artwork and flexible furniture, promoting interaction and collaboration. While exposition is highlighted through curated displays, celebrating the students' creativity and inspiring further artistic expression. Additionally, each concept model and drawing explores six common Gestalt principles, which were developed by German psychologists to describe how we interpret the world around us. Gestalt principles; Law of symmetry, Law of proximity, Law of prägnanz, Law of similarity, Law of continuity and Law of closure.



CONCEPTUAL

DESIGN



Investigating the concept
of journey and exploration



Each model and drawing represents six common Gestalt principles.

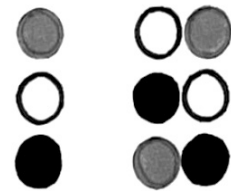
Law of symmetry



Law of symmetry: The tendency of the brain to perceive symmetrical elements as being connected, even if they are not.



Law of proximity



Law of proximity: The natural perception of objects being comprised as a group rather than seeing them as individual objects.



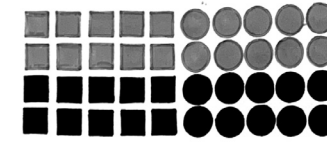
Law of prägnanz



Law of prägnanz: Humans prefer experiences that are simple and orderly, and when faced with perceived complexity, our brains tend to simplify them.



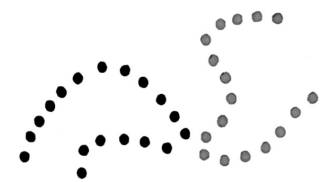
Law of similarity



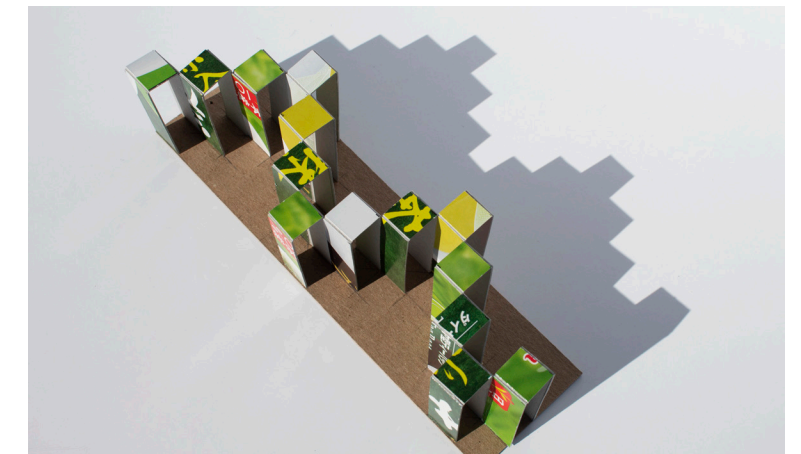
Law of similarity: The brain's ability to perceive items or objects as related if they share certain characteristics, such as shape, color, or pattern.



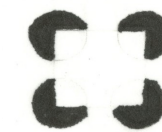
Law of continuity



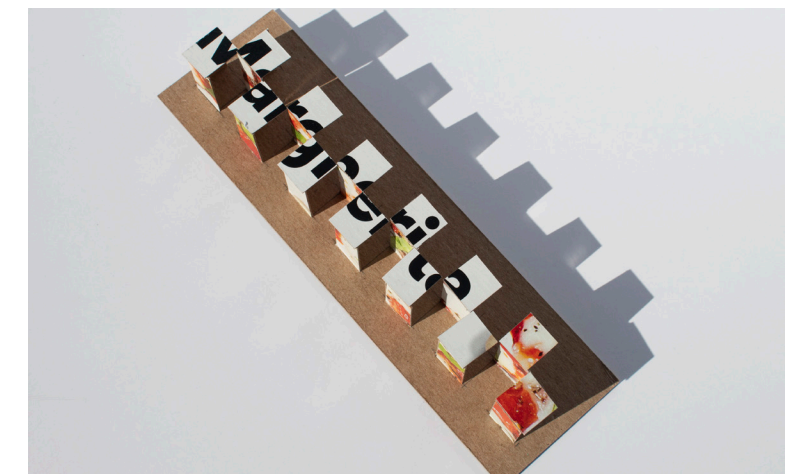
Law of continuity: The brain tends to follow a path that is literal or implied by the objects it sees.



Law of closure

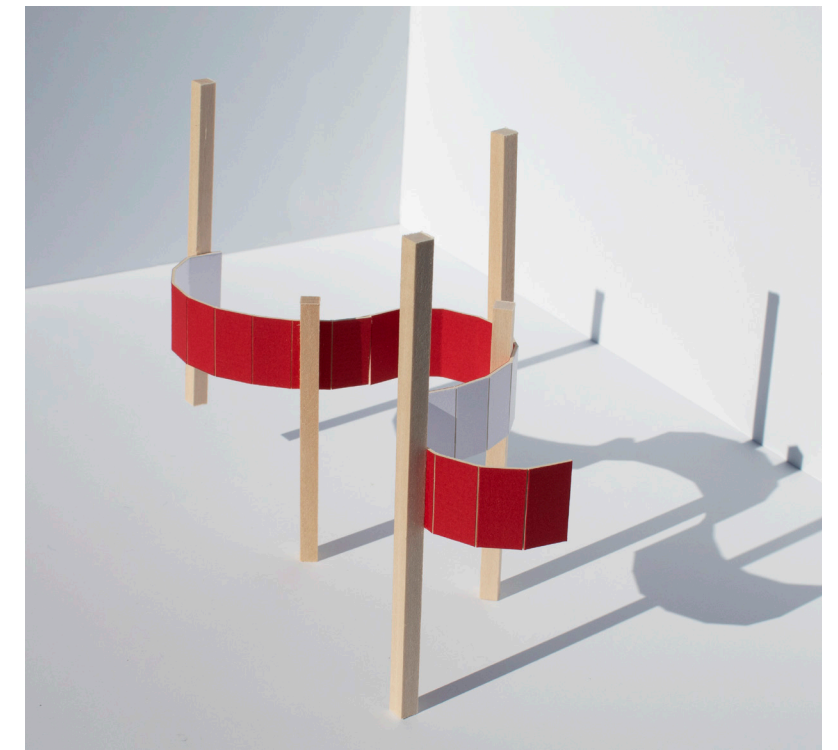
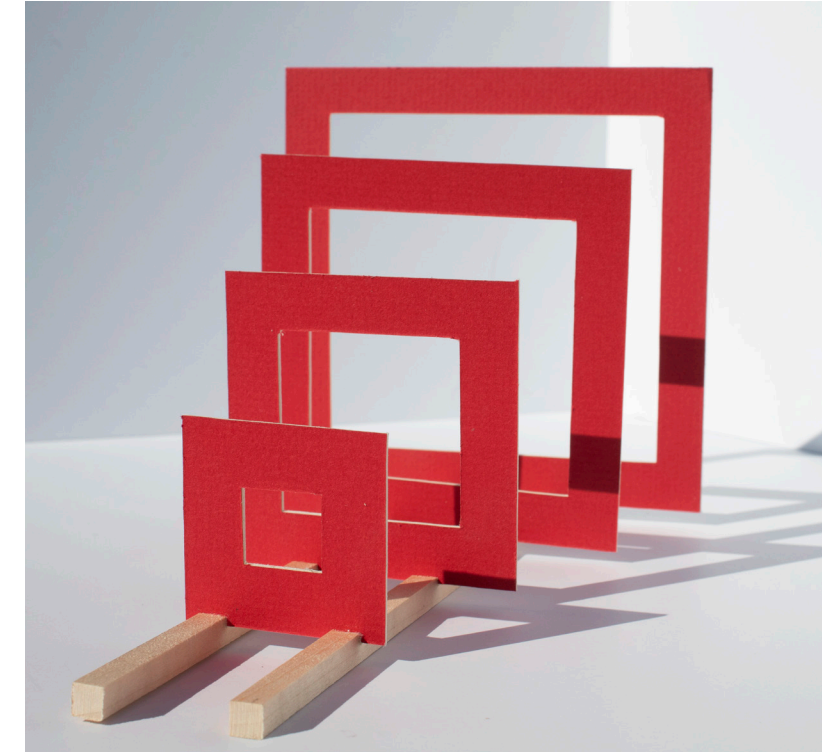
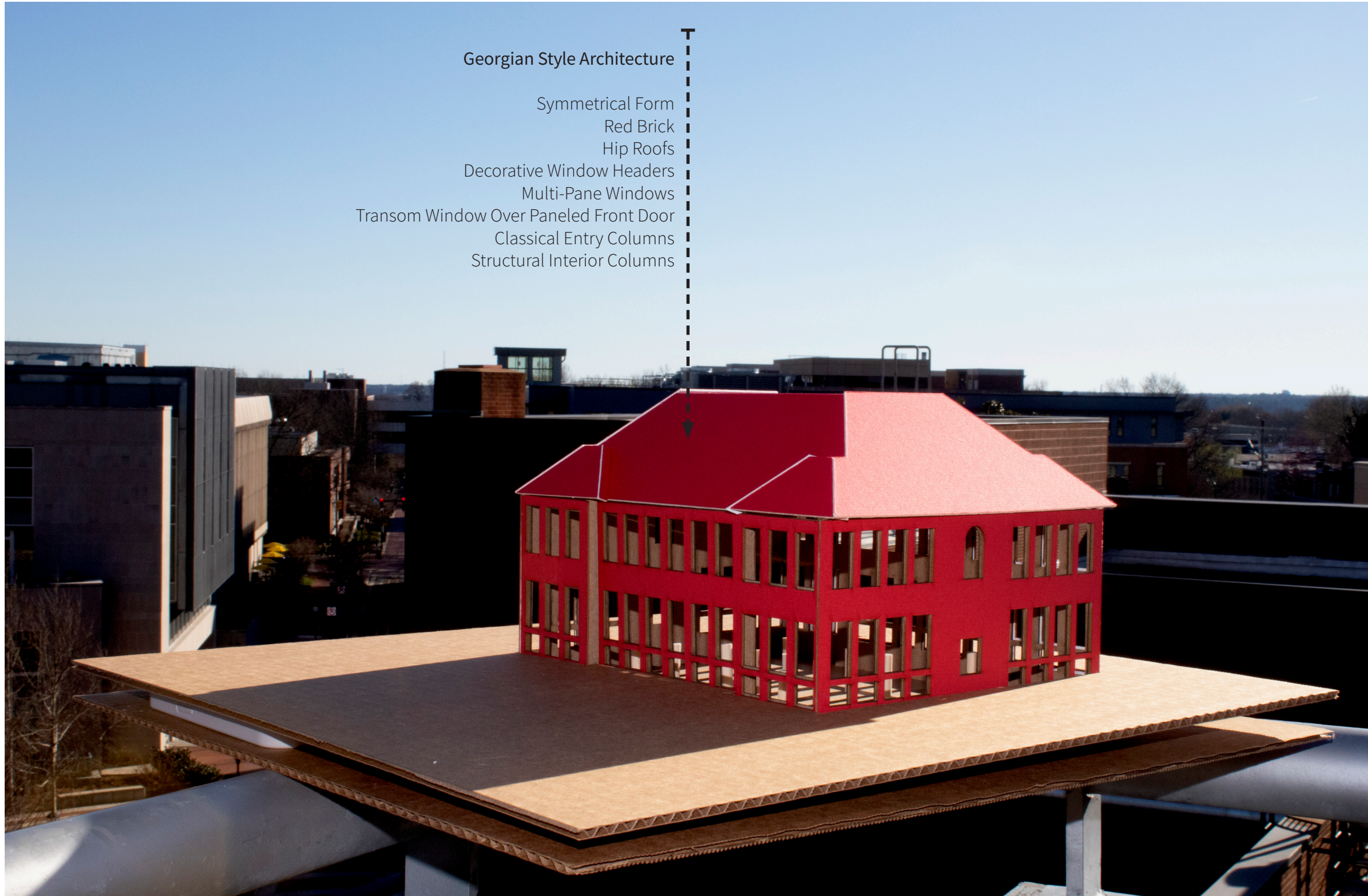


Law of closure: The way the brain perceives an incomplete object as a complete one.

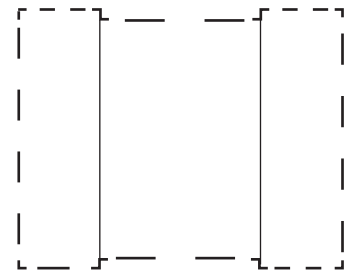
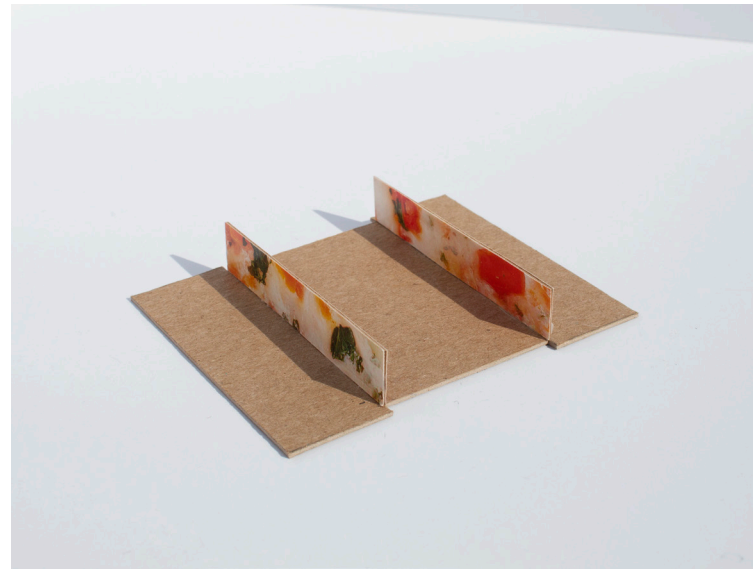


WORKING SITE

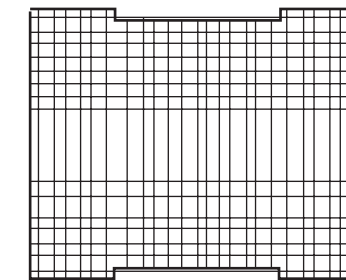
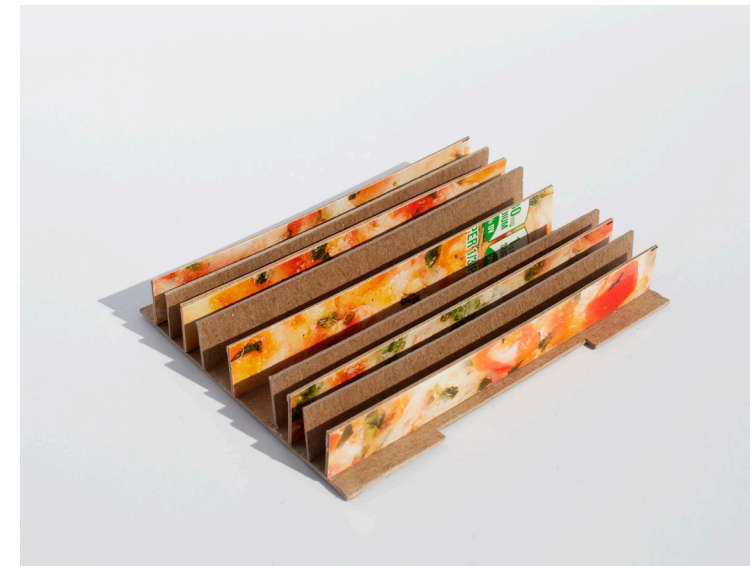
MODEL



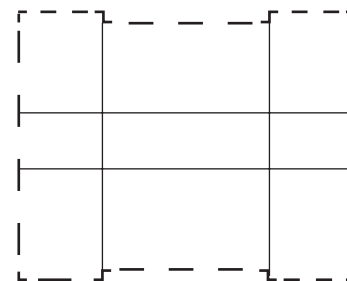
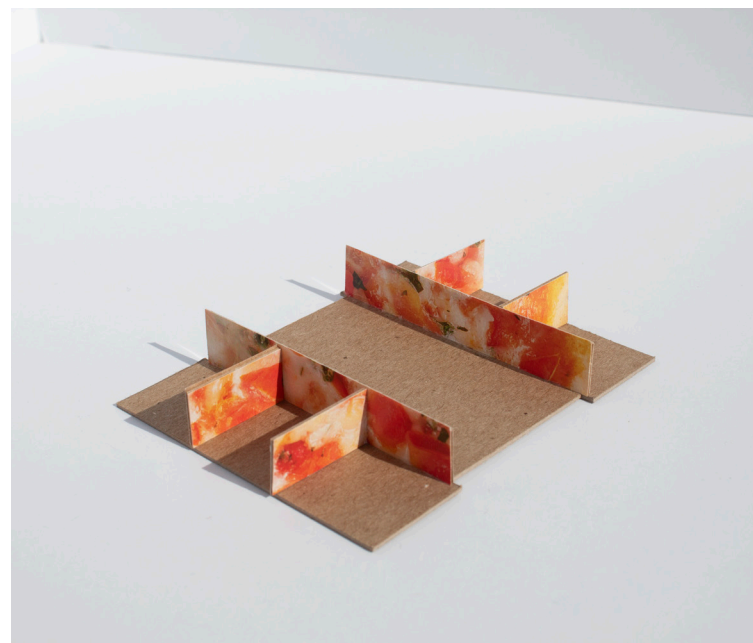
PARTI DIAGRAMS



Geometry



Openings



Structure



Levels

A yellow paper sculpture of a plant, possibly a tulip, with a brown base. The sculpture is made of multiple layers of yellow paper strips, creating a textured, layered effect. It is set against a white background.

S C H E M A T I C

P H A S E

PROGRAMMING PRECEDENT STUDIES

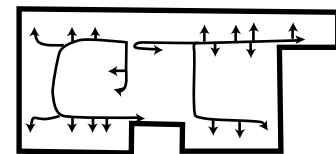
Borgafjellet Elementary School

LINK arkitektur
Norway
2021
76,000 SF

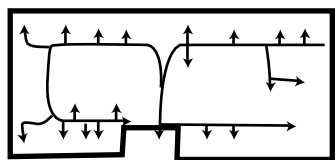
The primary focus of this project was to design a sustainable school that enhances the well-being of both students and teachers. Some design methods were employed to promote the health of students, such as incorporating natural materials like wood, providing ample natural light, and using earth-tone colors found in minerals. The space creates a calming and relaxing first impression upon entering, thanks to the color palette and natural light provided by the skylight.

I was interested in how the designers divided the floor plan based on the school's program and health goals. The floor plan is divided into two equal parts. The first half comprises classrooms for students aged 5-8, the atrium, and the after-school space. The second half has classrooms for students aged 9-10, as well as the gym and outer hall. The primary stairs to the first floor are located in the center of the floor plan, which is the area that receives the most traction and natural light. On the first floor, the floor plan is organized similarly to the ground floor, with the library on one side and the teachers' lounge and balcony on the opposite side.

Circulation Diagram



Level 1



Ground Level

Public/Private Diagram



Level 1



Ground Level



Vestibule



Vestibule



Activity Zone

PROGRAMMING PRECEDENT STUDIES

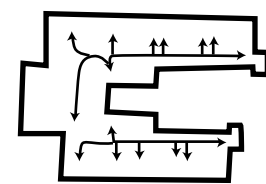
Brown Point Elementary School

TCF Architecture
Tacoma, United States
2018
56,430 SF

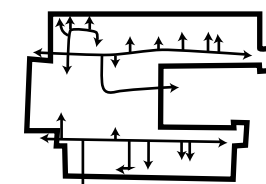
Tacoma, Washington, is located by the waterfront and has a strong history and sense of community. This school was designed to foster collaboration, strengthen learning, and enhance social connections. The community requested a school with bold colors, big moves, and a sense of “wow,” as well as a space that promotes public utilization of the building beyond school hours.

This building has multiple program spaces that serve as multifunctional zones. Located in the center are the floor plan which is mirrored through the central axis. In the center, are the larger community spaces, like the gymnasium and exploratory commons. In the hallway spaces, there are flexible areas that provide students with different spaces.

Circulation Diagram

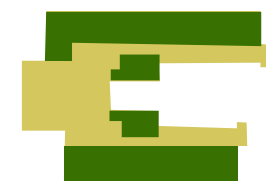


Level 2

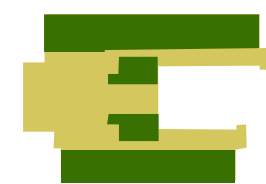


Level 1

Public/ Private Diagram



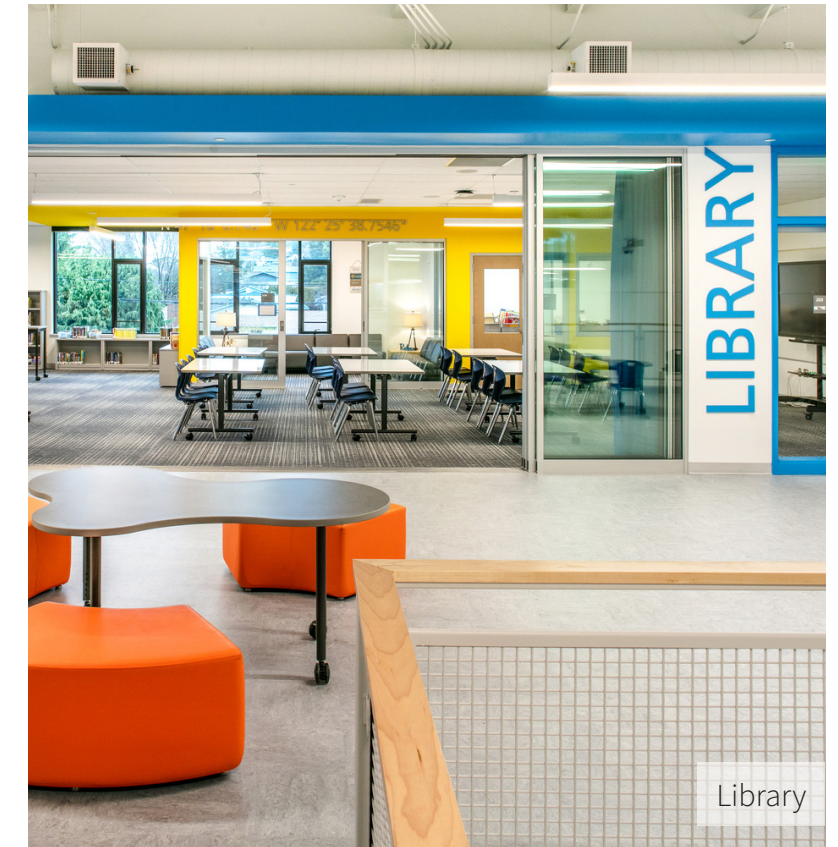
Level 2



Level 1



Exploratory Commons



Library



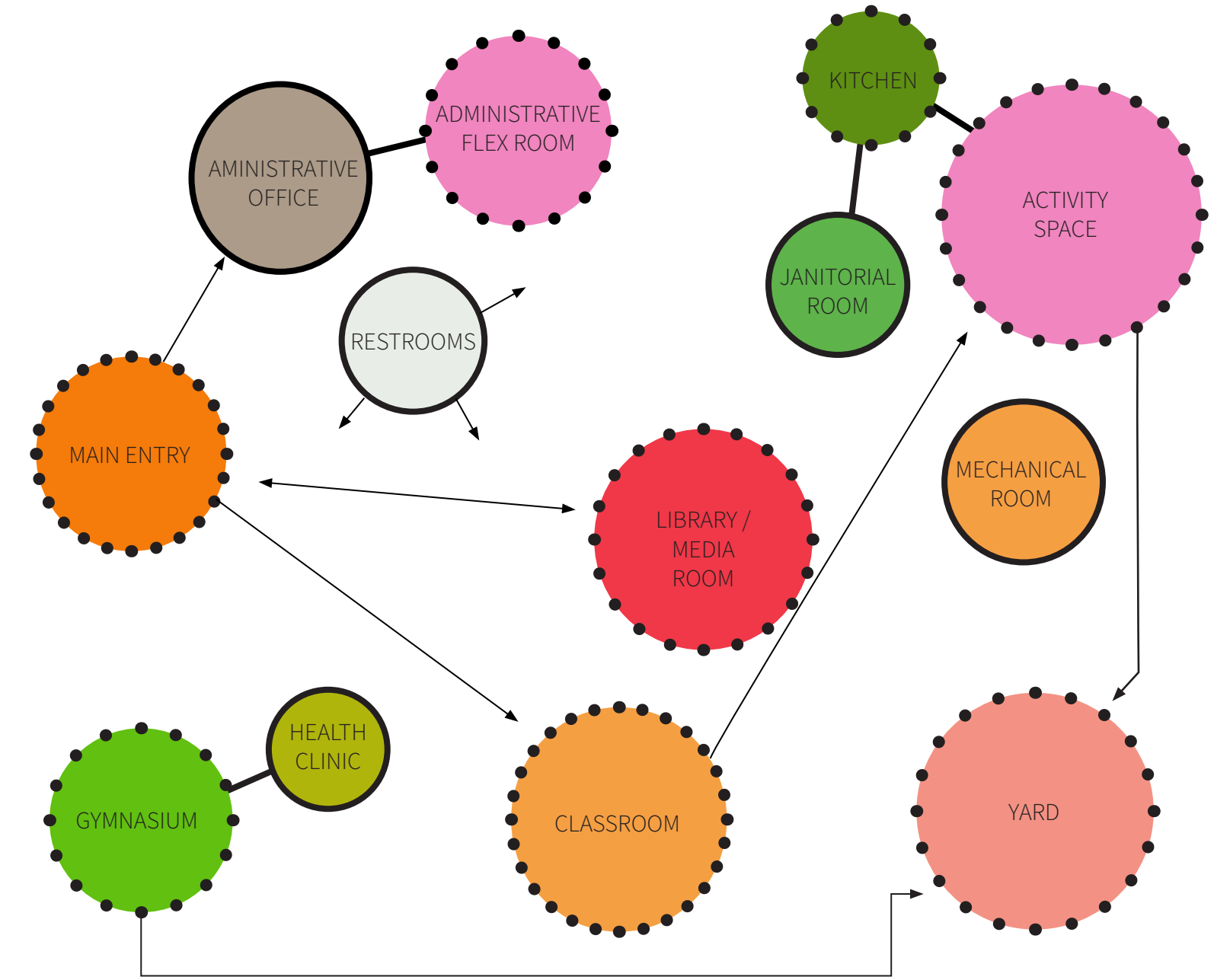
Exploratory Commons

MATRIX PROGRAMMING

	AREA SF	QUANTITY	PRIVACY	LIGHTING FOOTCANDLES	PLUMBING	FF+E SPECIFICS
MAIN ENTRY	200	1	L	10-15	Y	CHIAR, SIDE TABLE, HOMASOTE BOARD
AMINISTRATIVE OFFICE	120	7	H	30-50	N	DESK, OFFICE CHAIR, STORAGE
HEALTH CLINIC	300	1	H	50	Y	DESK, OFFICE CHAIR, STORAGE, BED
STAFF RESTROOM	8	2	H	5-10	N	PLUMBING
ADMINISTRATIVE FLEX ROOM	300	1	H	20-50	Y	CHAIRS, SOFA, CONFERANCE TABLE
JANITORIAL ROOM	60	3	L	30-40	N	SHELVING
MECHANICAL ROOM	60	1	L	30	Y	SHELVING
ACTIVITY SPACE	700	1	L	20-50	Y	TABLES, CHAIRS, FLEX WALLS
KITCHEN	200	1	M	60-70	Y	SHELVING
GYMNASIUM	5,000	1	L	30-50	Y	SHELVING
CLASSROOM	1,000	6	M	50	Y	DESK, CHAIR, STORAGE DESK, CHAIR, STORAGE, DRYING RACK, WORK TABLE
STUDENT RESTROOM	8	6	M	5-10	Y	PLUMBING
LIBRARY / MEDIA ROOM	3,500	1	H	50	N	DESK, CHAIR, STORAGE
YARD	NA	1	L	NA	Y	STORAGE

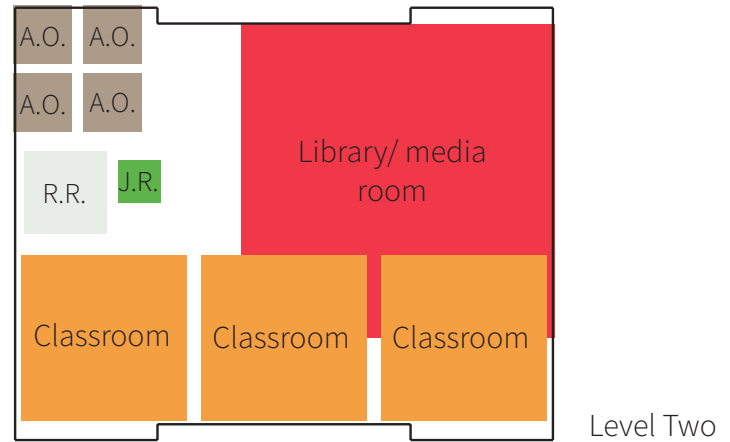
- ADJACENCY MATRIX KEY**
- IMPORTANT
 - CONVENIENT
 - NOT IMPORTANT
 - Y YES
 - N NO
 - H HIGH
 - M MEDIUM
 - L LOW

ADJACENCY STUDIES

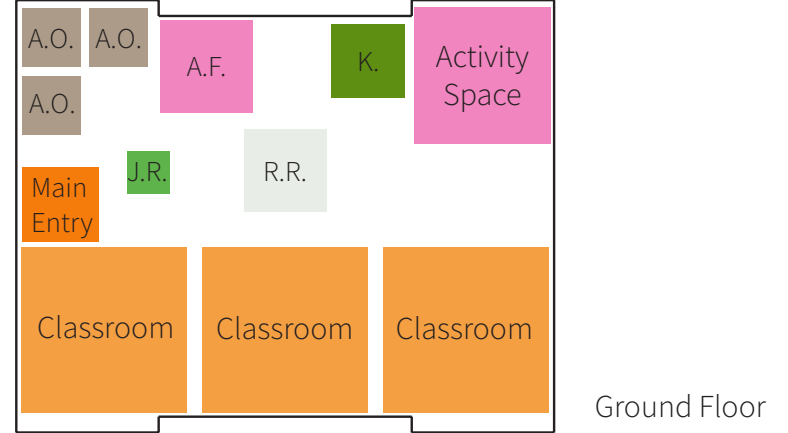


- KEY**
- PRIVATE
 - SEMI-PRIVATE

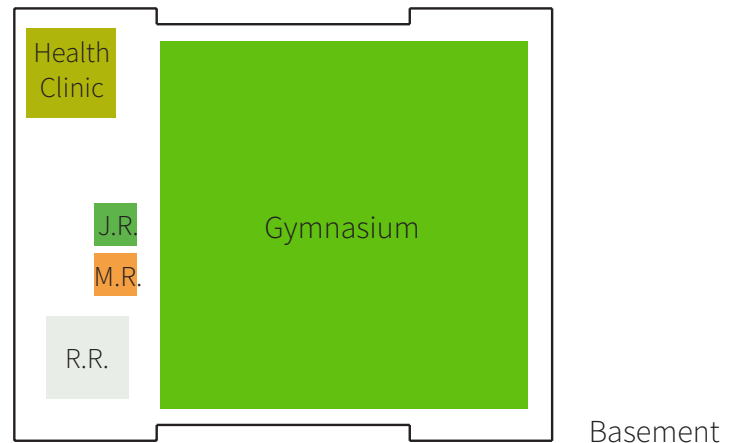
PROGRAMMING VISUALIZATION



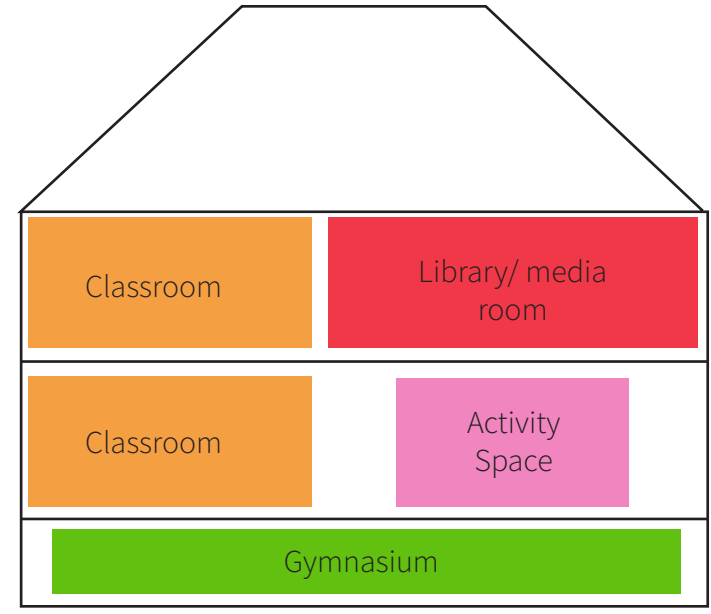
Level Two



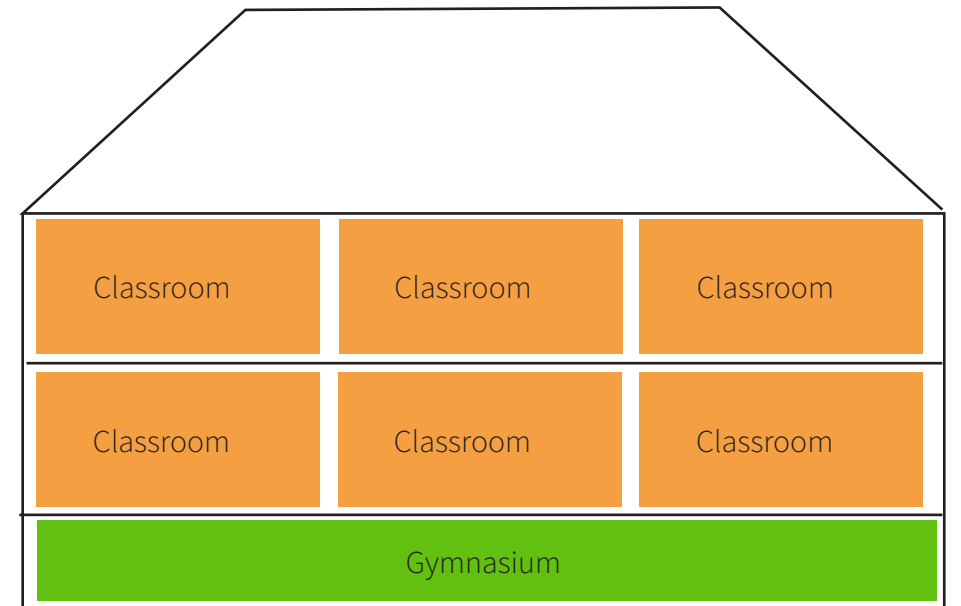
Ground Floor



Basement

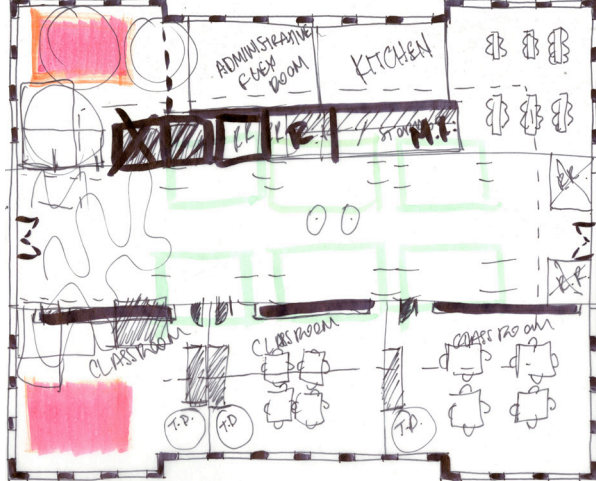


Cross Section

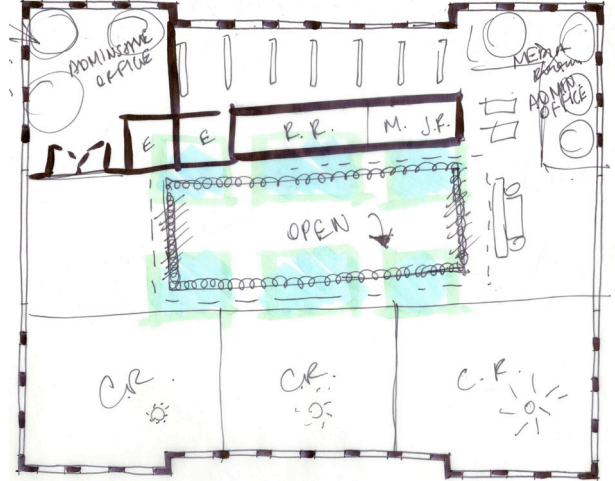


Longitudinal Section

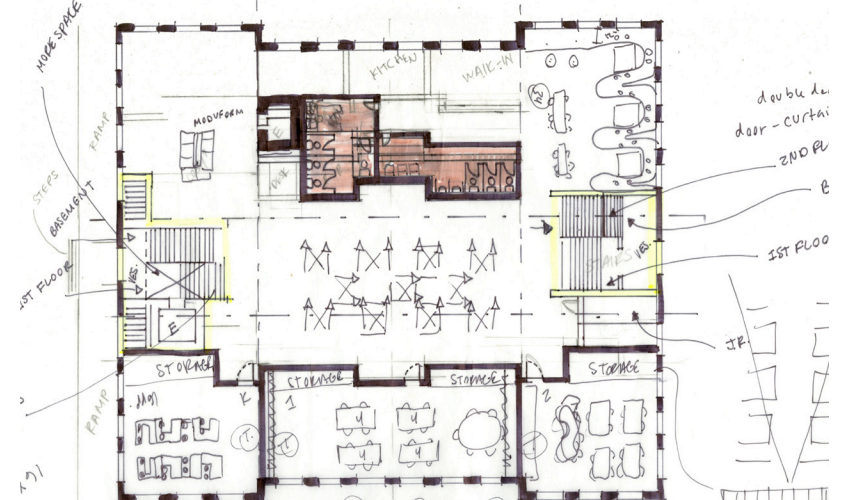
SPACE PLANNING



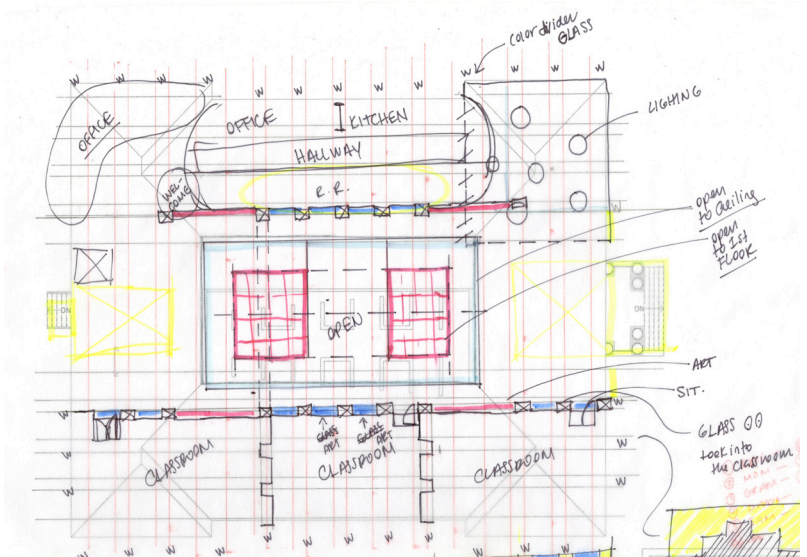
Ground Floor



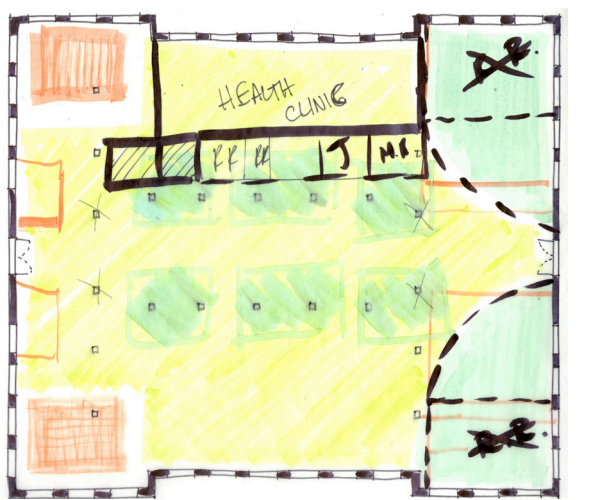
Level Two



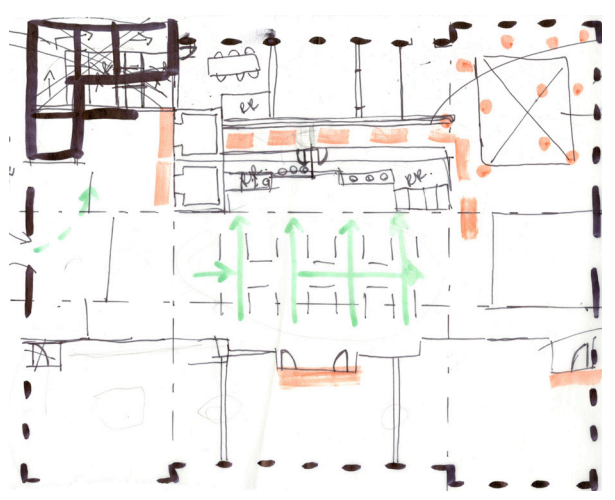
Ground Floor



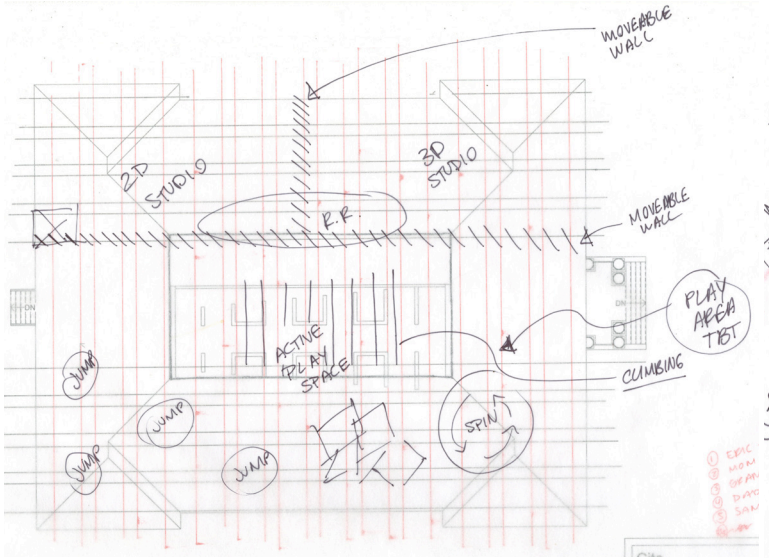
Level Two



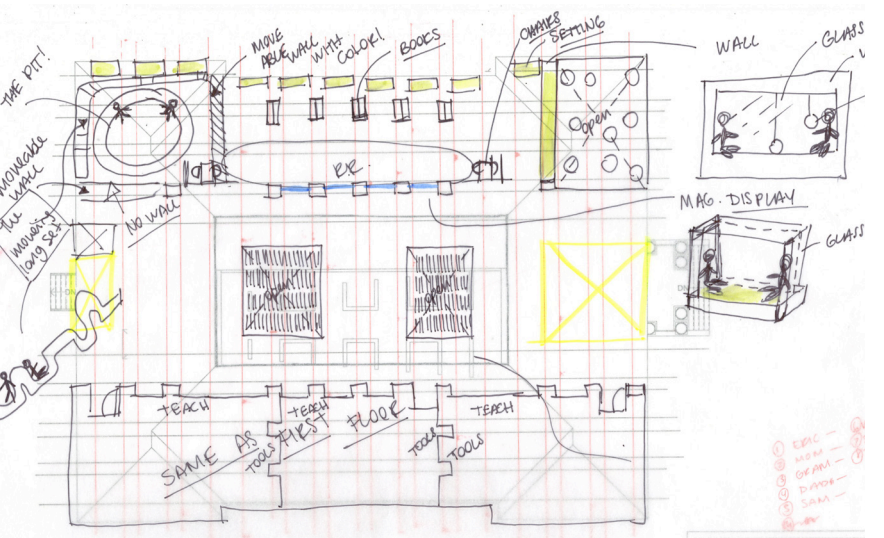
Basement



Ground Floor

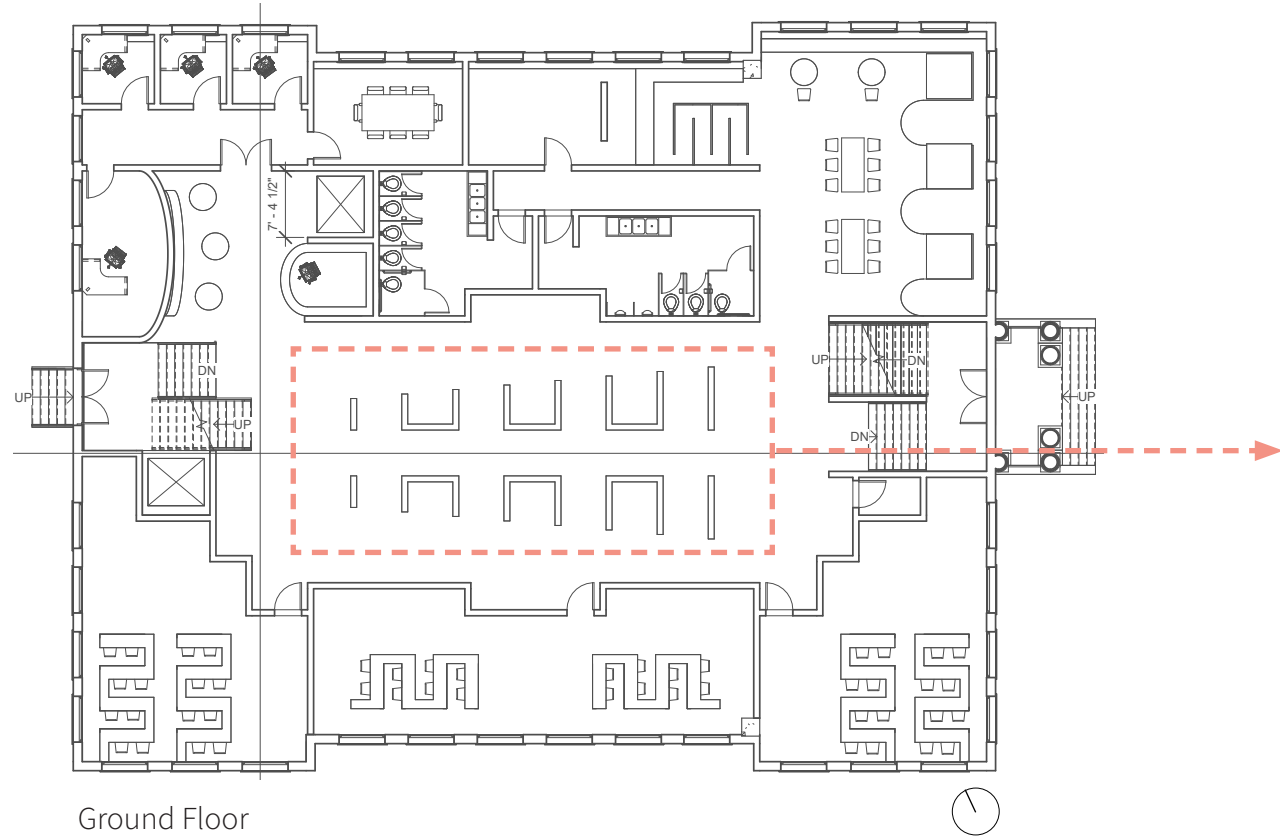


Basement

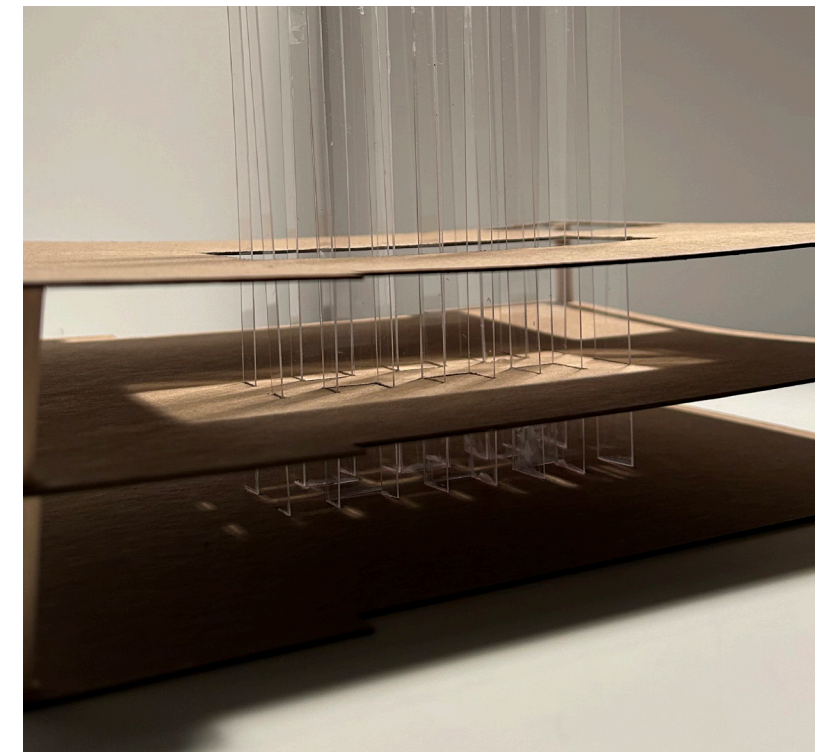
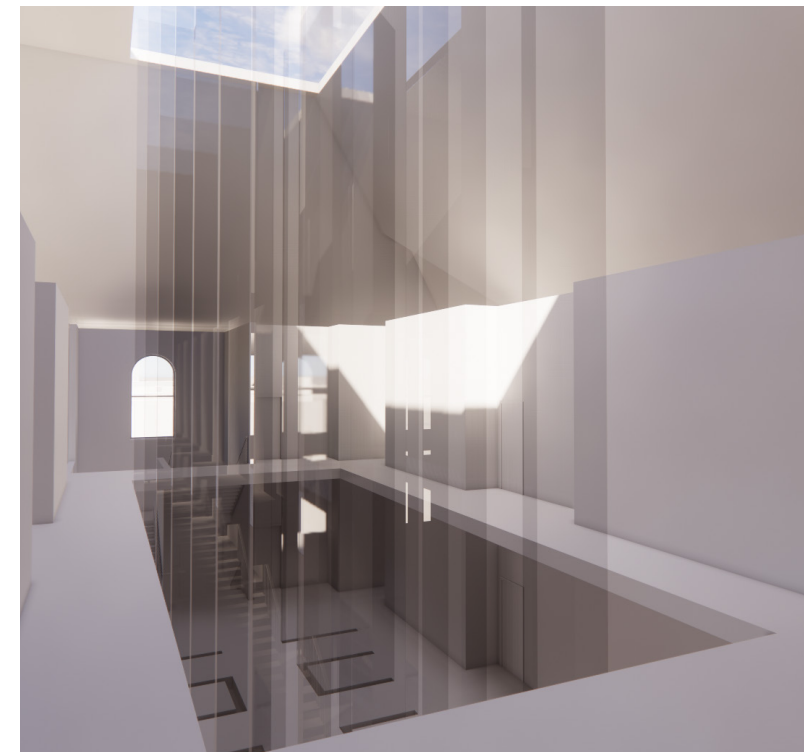
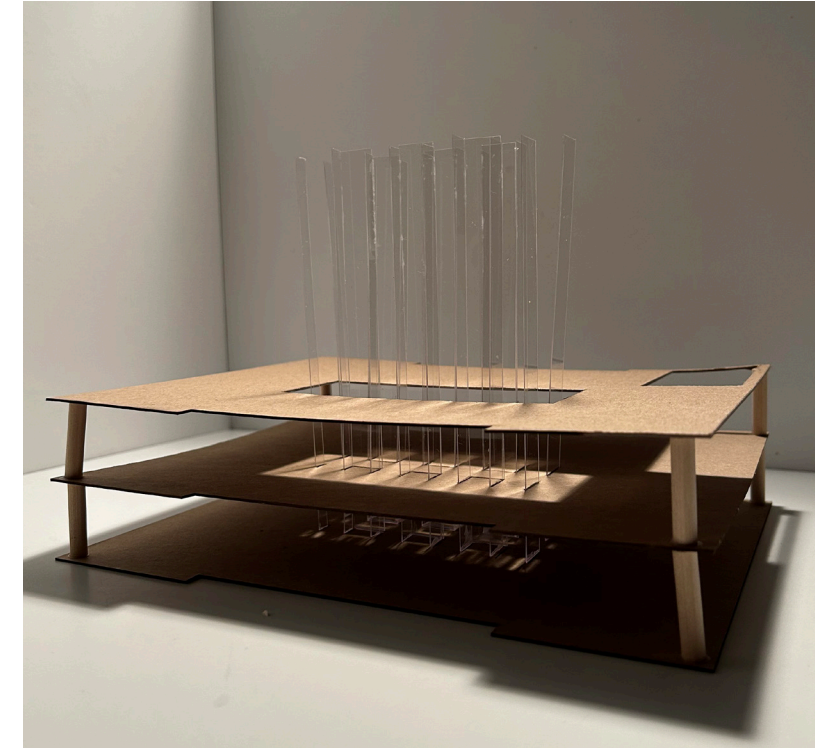
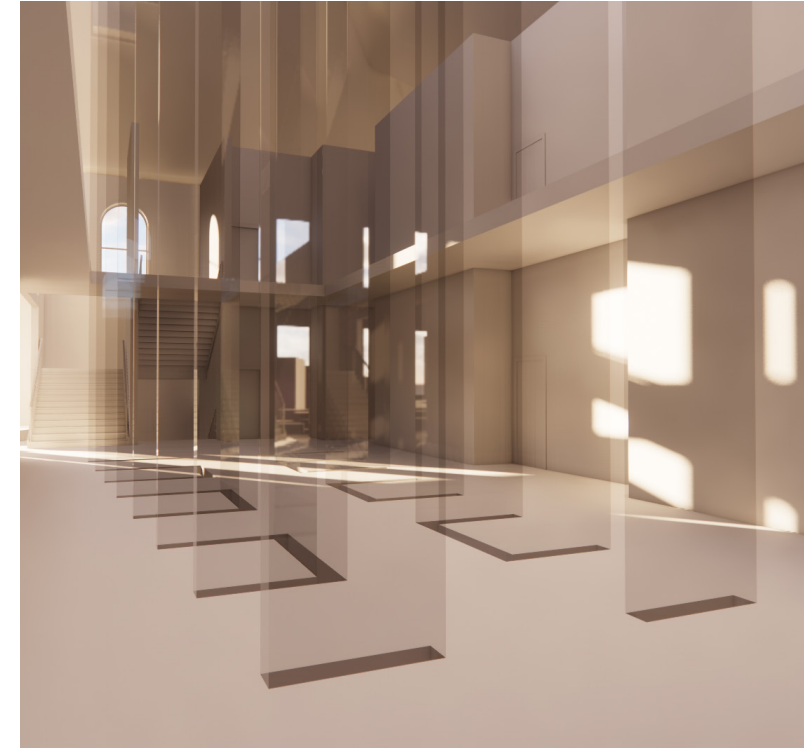


Level Two

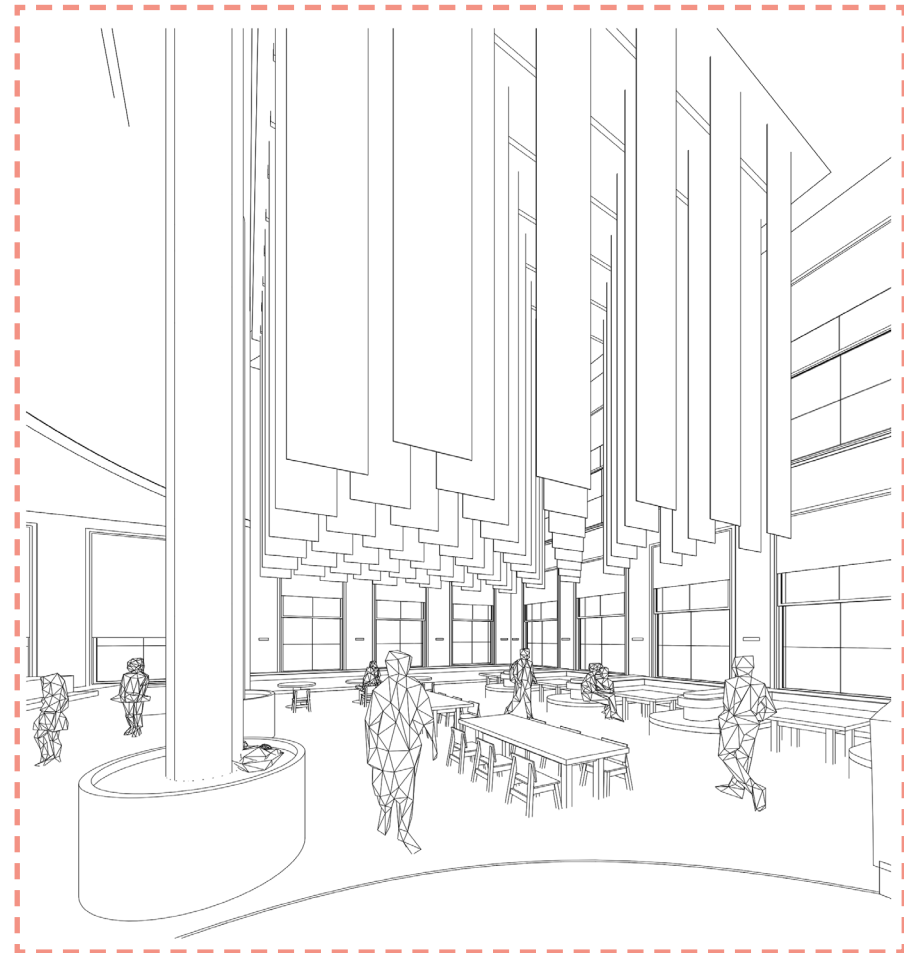
DESIGN FEATURE



Inspired by Loop Kindergarten in Tianjin, China, I wanted to design an element that connects all three levels together. I had the idea of using a translucent material to allow students to display their work while providing light and color to reflect off the walls, by incorporating a skylight. Over time, I incorporated the idea of displaying work on the walls and used this geometric form to guide an element of a future design feature.

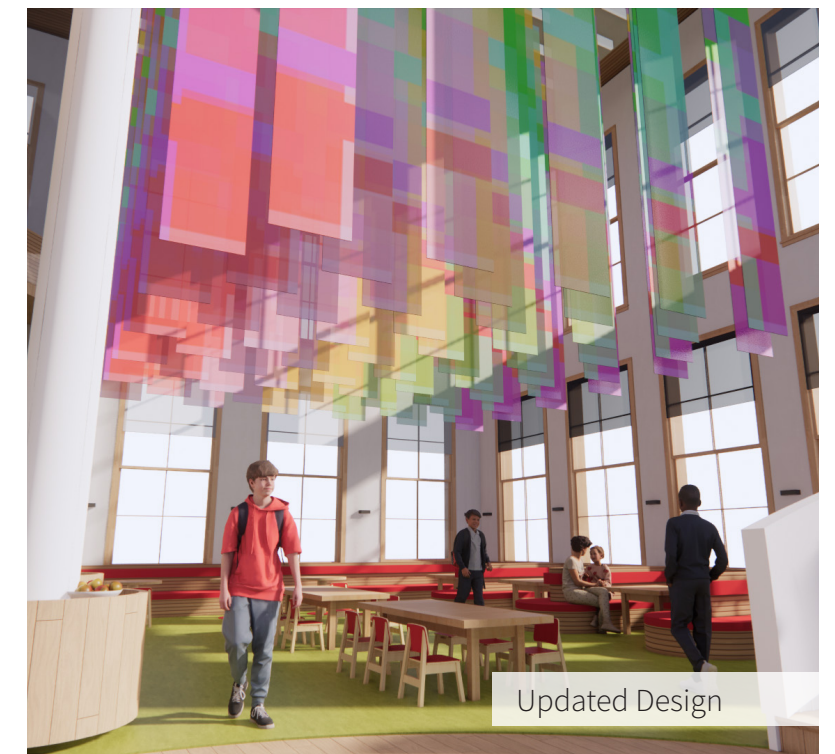
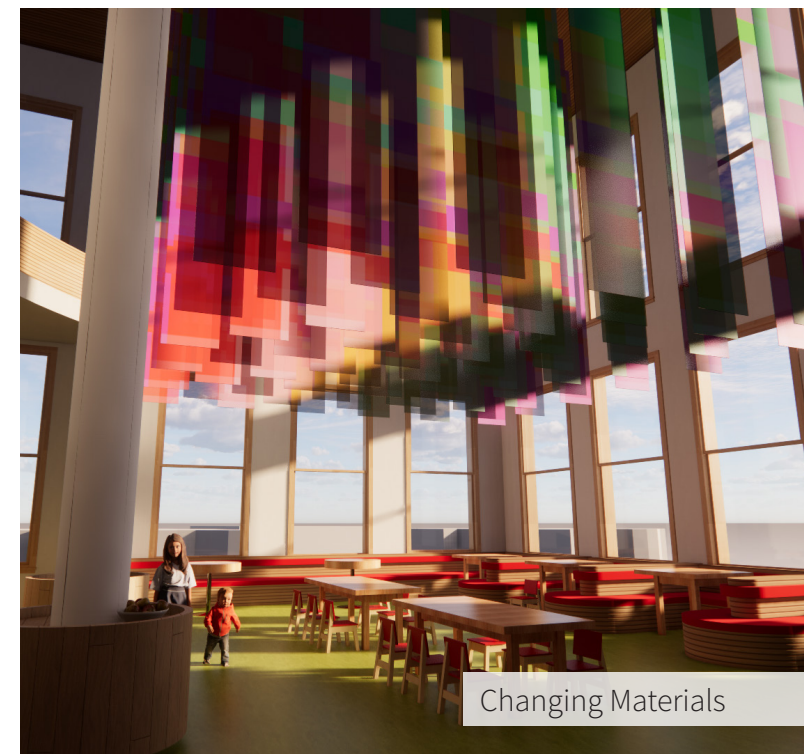


DESIGN PROCESS



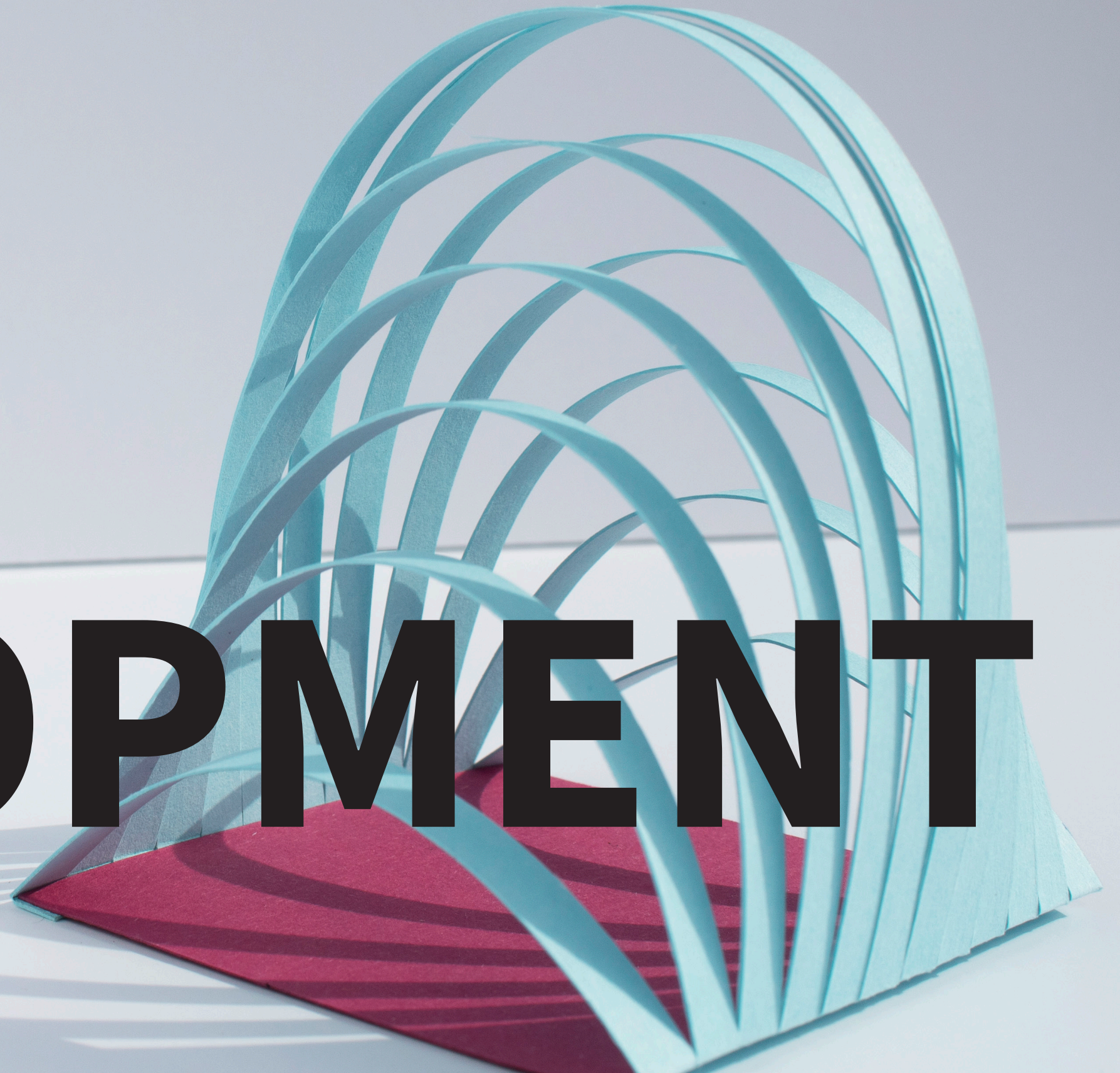
Activity Space

This idea was later inverted and developed into colorful fabric panels. Initially, I was thinking of using sheets of colored acrylic, but I changed my material to chiffon fabric to allow for movement.

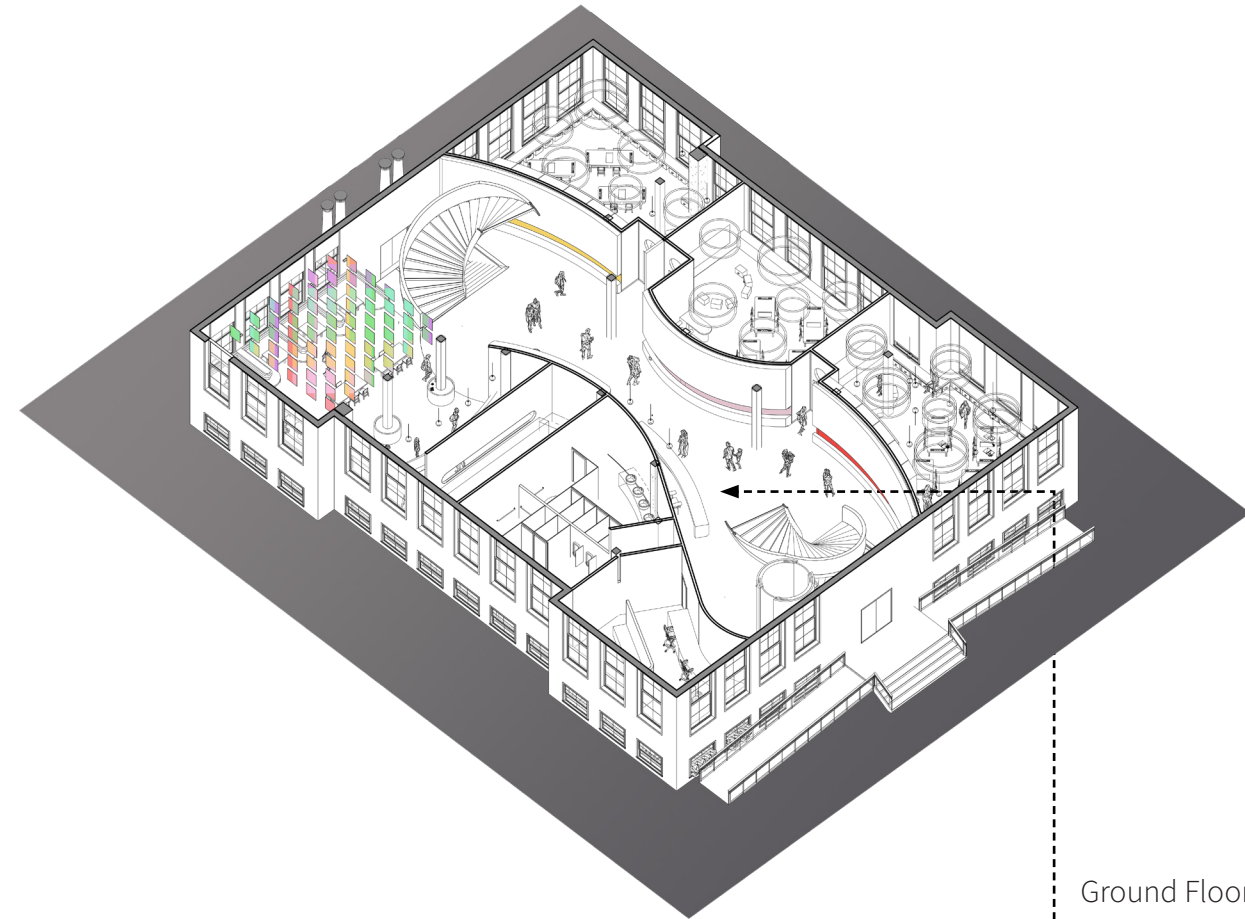


DESIGN

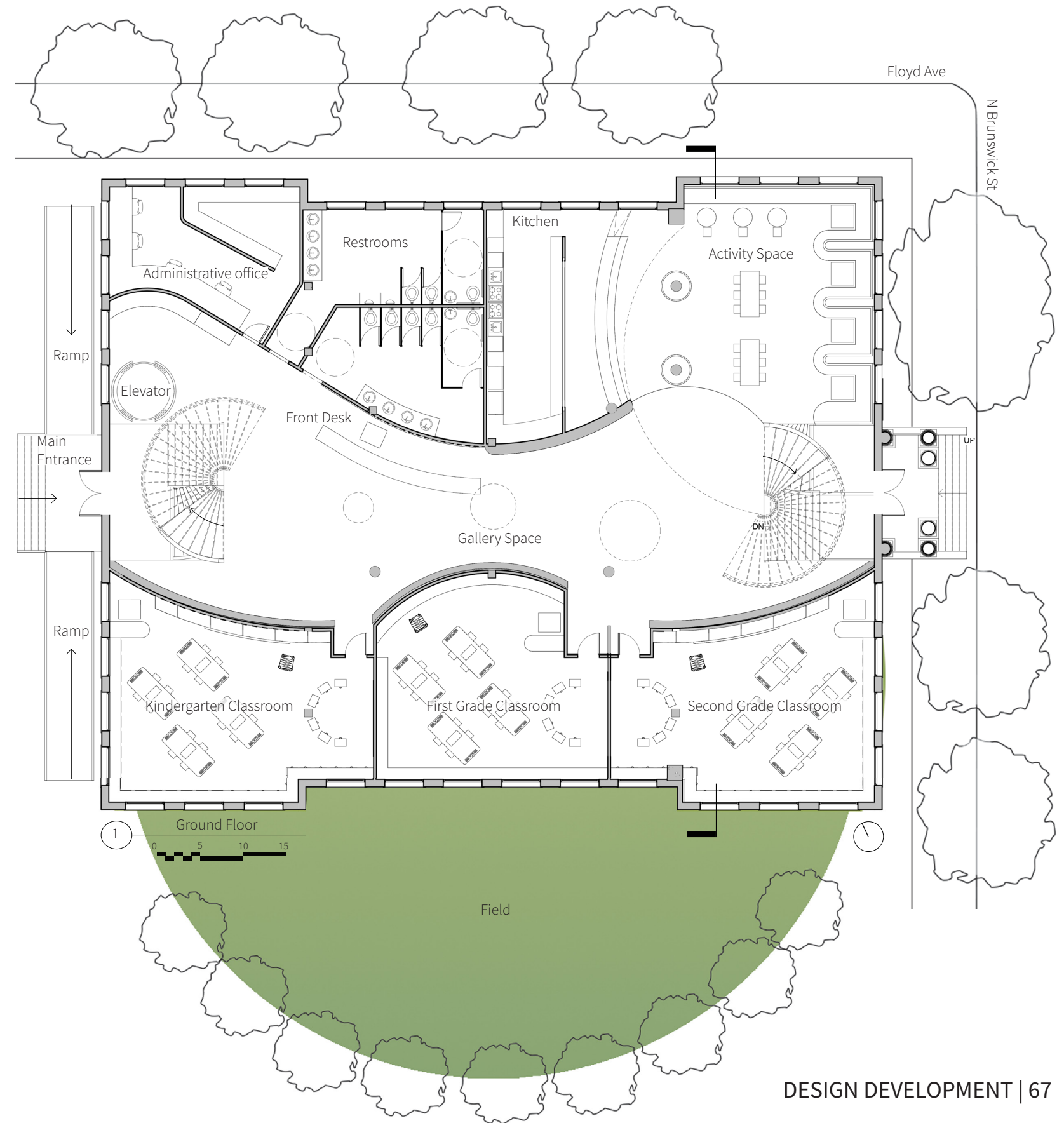
DEVELOPMENT



GROUND FLOOR



- Ground Floor
- Front Desk
- Gallery Space
- Administrative office
- K-2nd grade classrooms
- Restrooms
- Activity Space

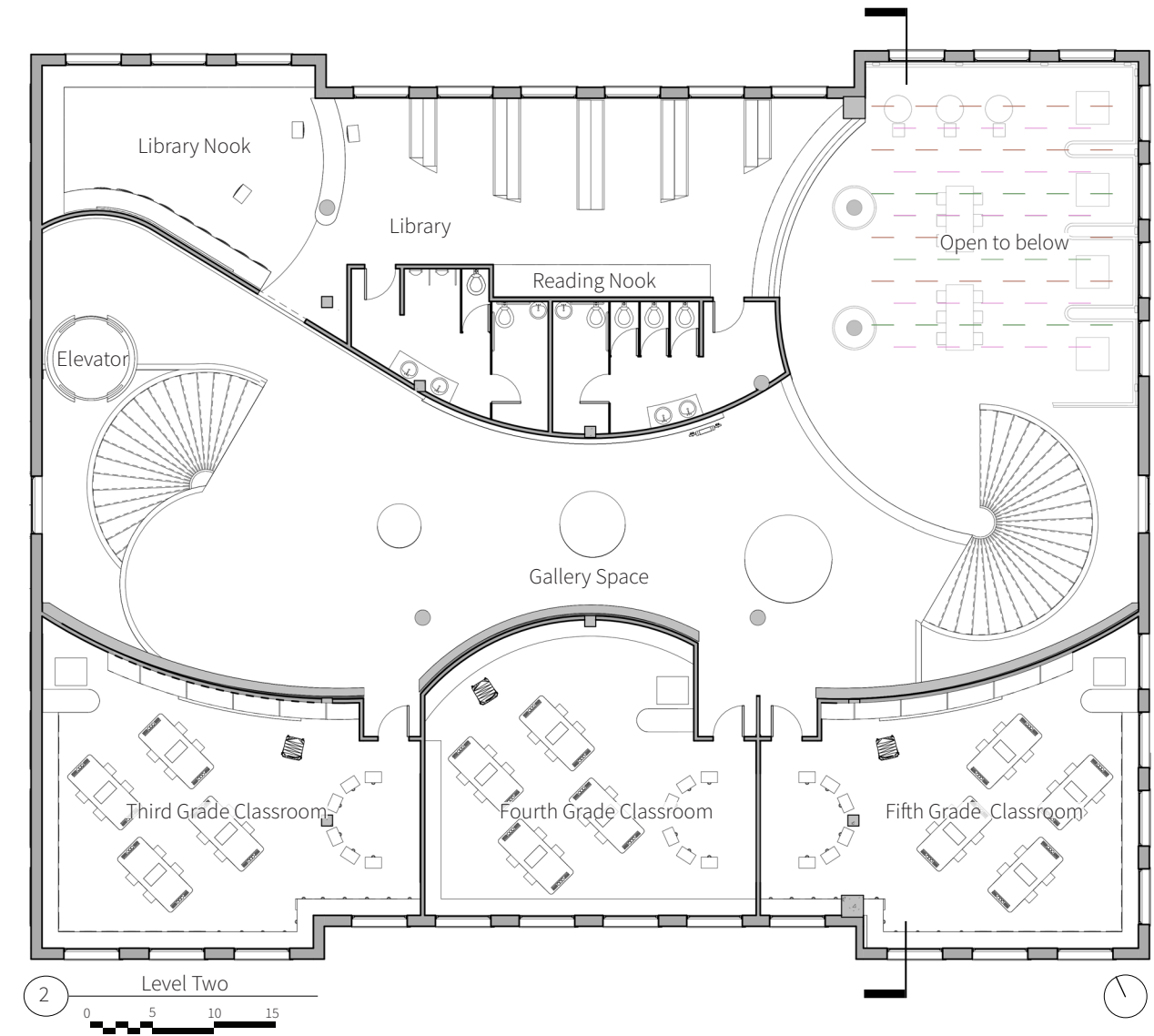


SECOND FLOOR

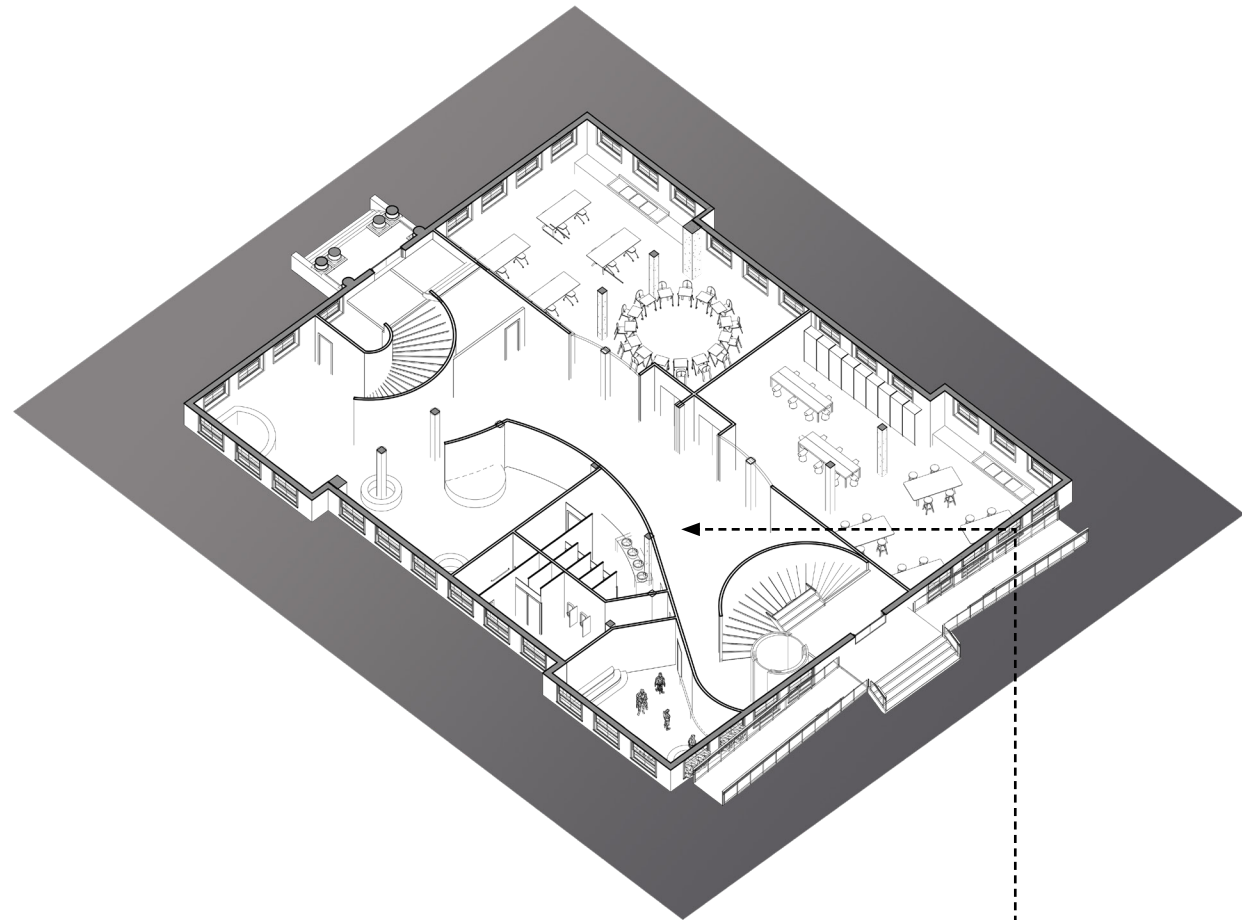


Second Floor

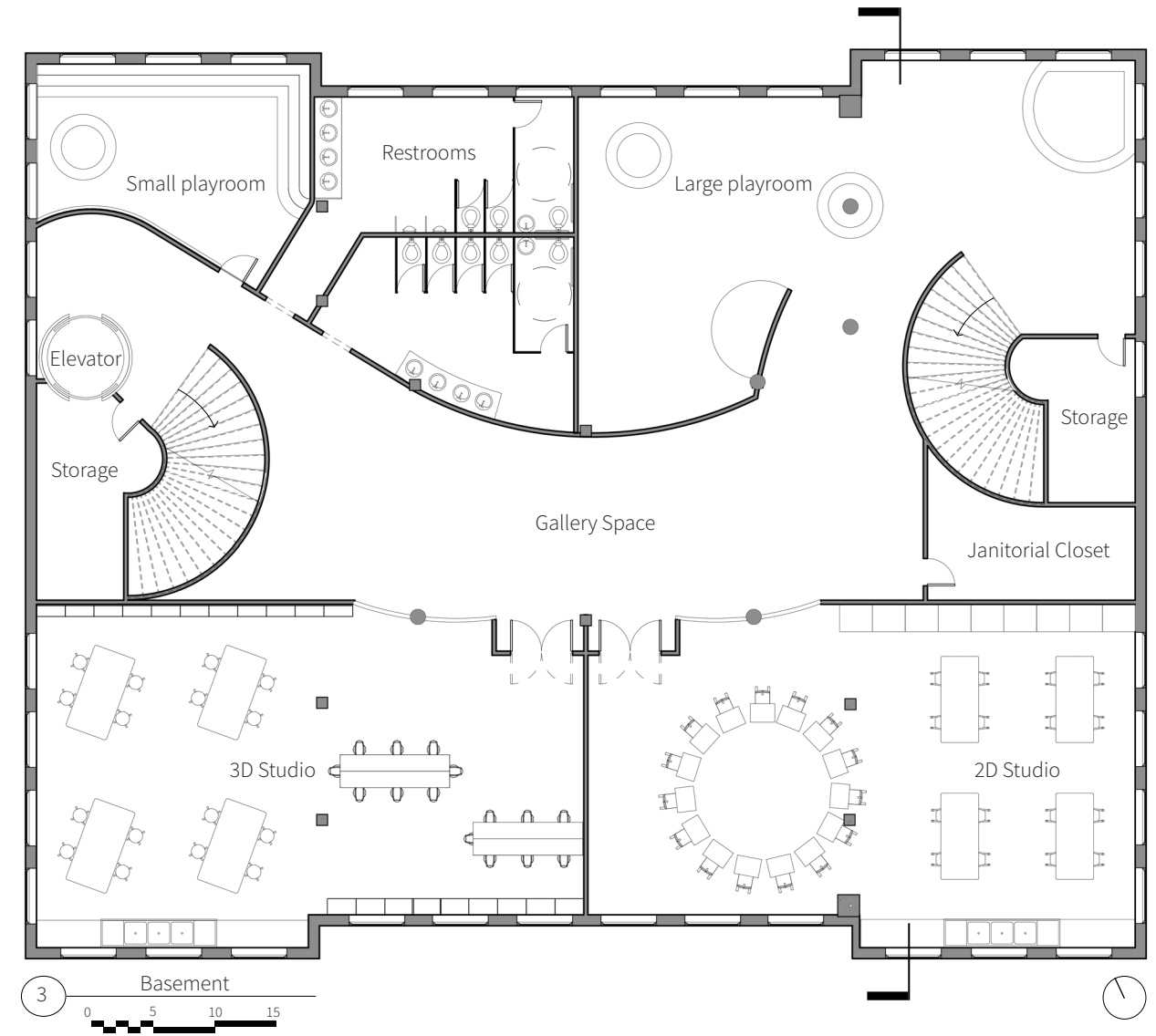
- Gallery Space
- 3rd-5th grade classrooms
- Library
- Restrooms



BASEMENT



- Basement
- 2D Studio
- 3D Studio
- Restrooms
- Small playroom
- Large playroom



GALLERY SPACE



Main Entrance Gallery Space
Ground Level

Color is a great tool to aid students understanding of wayfinding. Each grade has a designated color, which the classroom doors correspond to.

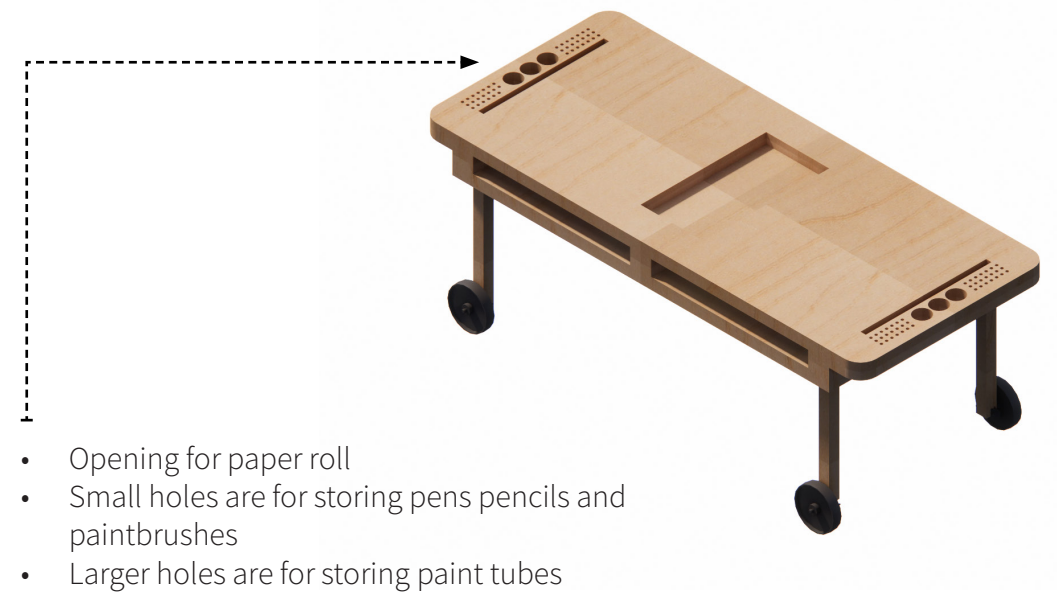
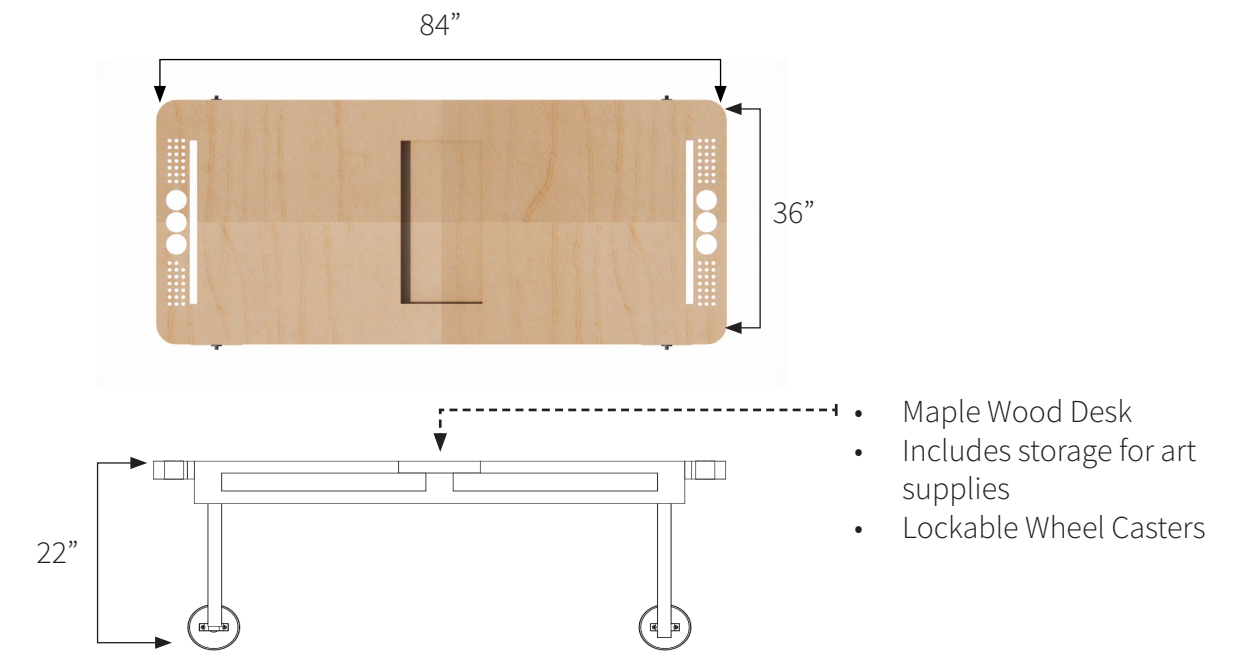
CLASSROOM



Classroom
Ground Level



DESK DETAIL



GALLERY SPACE



Love R18
3form
Kindergarten



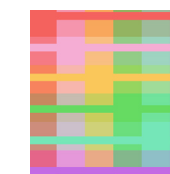
Cupid V18
3form
1st grade



Hickory G24
3form
2nd grade

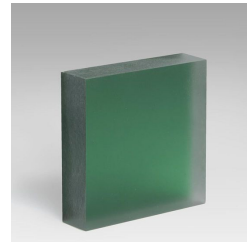


CROSS SECTION



This custom chifon print fabric suspended from the ceiling, represents each grade level interlinked together.

GALLERY SPACE



Isle G49
3form
3rd grade



Venice B13
3form
4th grade

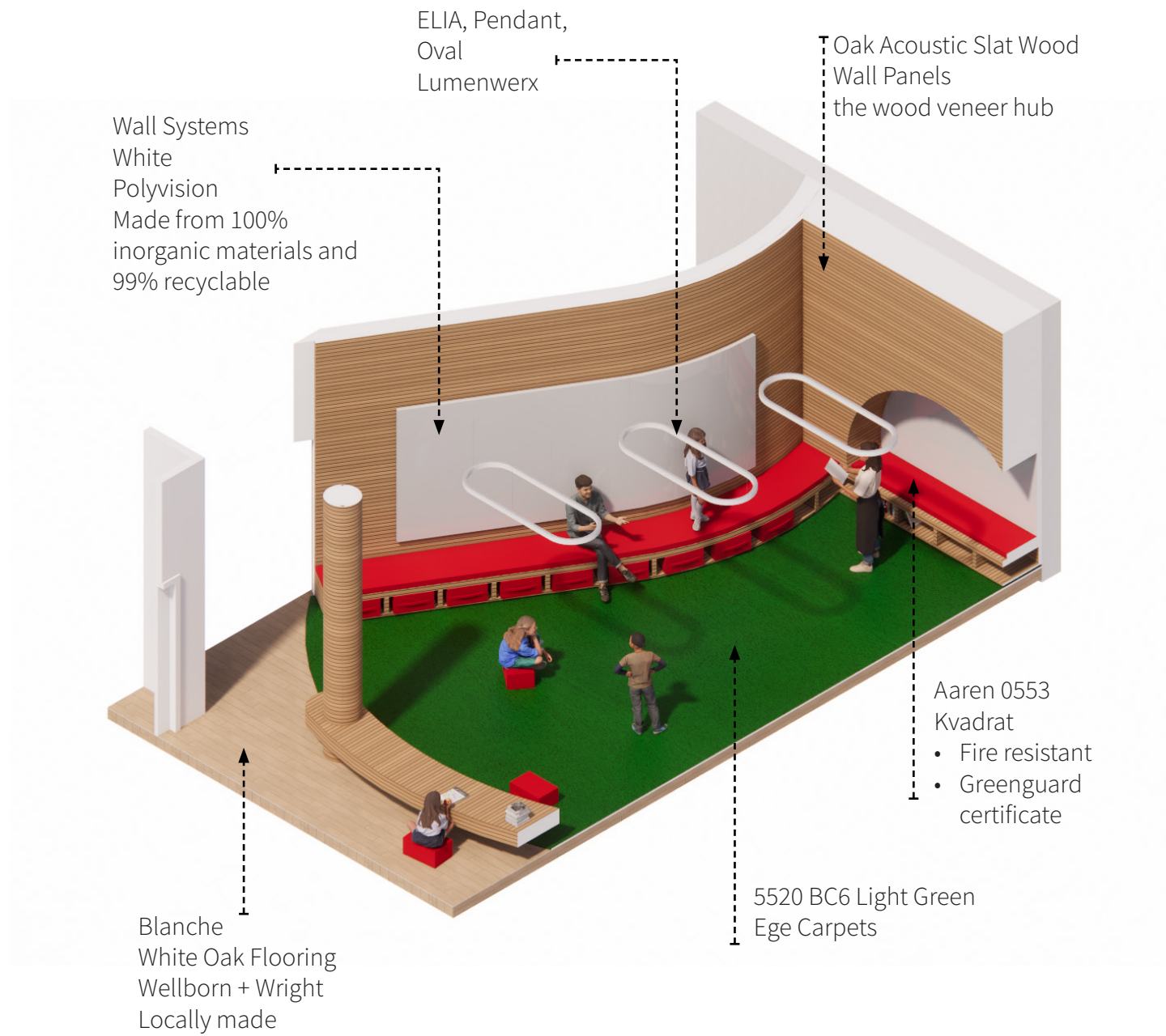


Iris V11
3form
5th grade

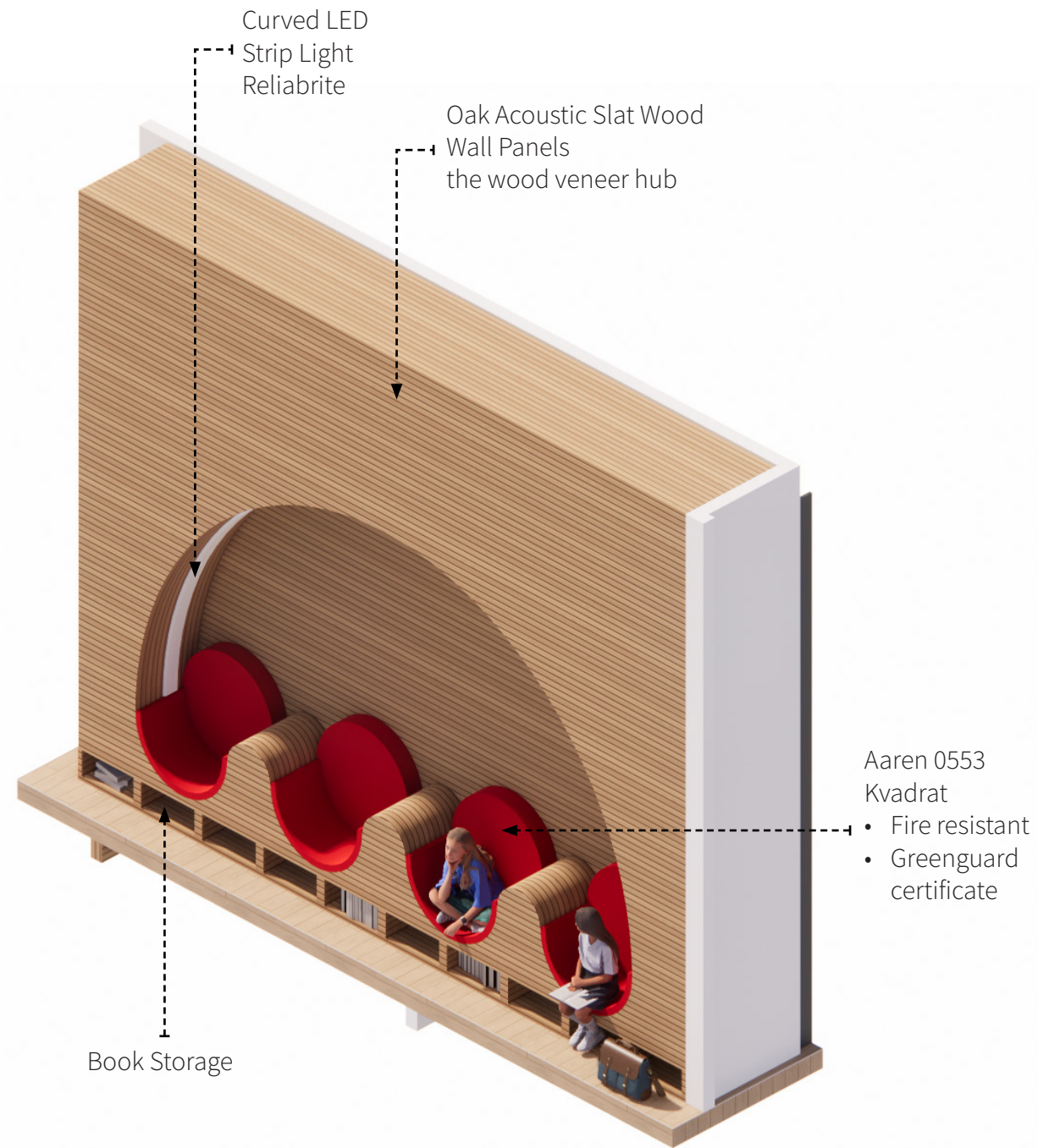


Gallery Hallway
Second Floor

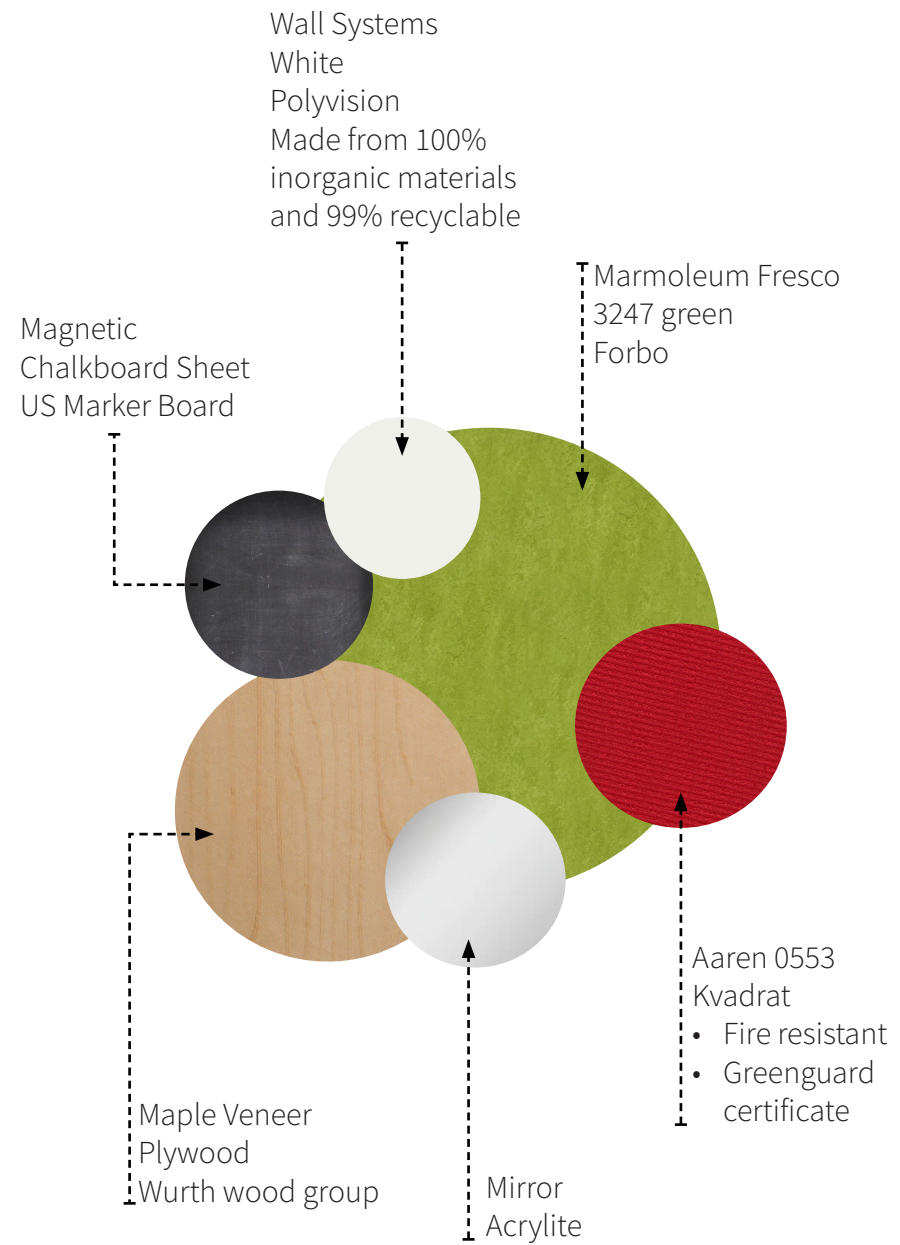
LIBRARY NOOK



READING NOOK



SMALL PLAYROOM



SPEC BOOK

Product Love R18 Chroma + Glass
Manufacture 3form
Link https://www.3-form.com/color/love?sample_type=chroma
Location Kindergarten
Sustainability Greenguard Certification
Purpose Chroma used for circular hanging device + glass used for wall paneling



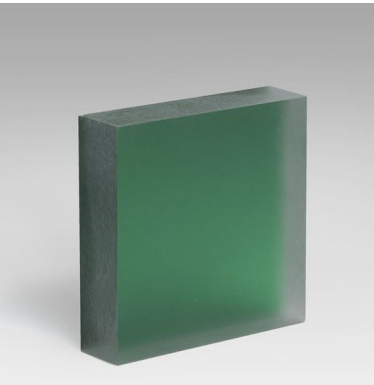
Product Venice B13 Chroma + Glass
Manufacture 3form
Link https://www.3-form.com/color/venice?sample_type=chroma
Location 3rd grade
Sustainability Greenguard Certification
Purpose Chroma used for circular hanging device + glass used for wall paneling



Product Cupid V18 Chroma + Glass
Manufacture 3form
Link https://www.3-form.com/color/cupid?sample_type=chroma
Location 1st grade
Sustainability Greenguard Certification
Purpose Chroma used for circular hanging device + glass used for wall paneling



Product Isle G49 Chroma + Glass
Manufacture 3form
Link https://www.3-form.com/color/isle?sample_type=chroma
Location 4th grade
Sustainability Greenguard Certification
Purpose Chroma used for circular hanging device + glass used for wall paneling



Product Hickory G24 Chroma + Glass
Manufacture 3form
Link https://www.3-form.com/color/hickory?sample_type=chroma
Location 2nd grade
Sustainability Greenguard Certification
Purpose Chroma used for circular hanging device + glass used for wall paneling



Product Iris V11 Chroma + Glass
Manufacture 3form
Link https://www.3-form.com/color/iris?sample_type=chroma
Location 5th grade
Sustainability Greenguard Certification
Purpose Chroma used for circular hanging device + glass used for wall paneling



SPEC BOOK

Product Blanche on White Oak
Manufacture Wellborn + Wright
Link <https://wellbornwright.com/products/wood-flooring/spring-2020-collection/blanche-on-white-oak/>
Location Classrooms, gallery space, library
Sustainability Proudly grown, harvested, and milled in America.
Purpose Flooring



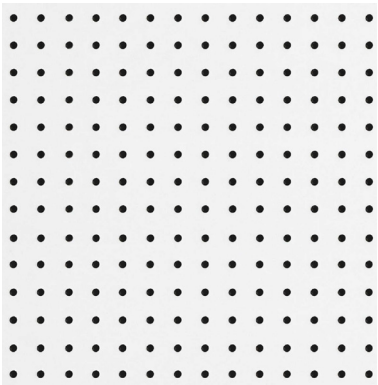
Product Marmoleum Fresco
Manufacture Forbo
Link <https://www.forbo.com/flooring/en-us/products/marmoleum/marmoleum-marbled/marmoleum-fresco/buvnka#3247>
Location Activity space, playroom
Sustainability Marmoleum is manufactured from natural raw materials
Purpose Flooring



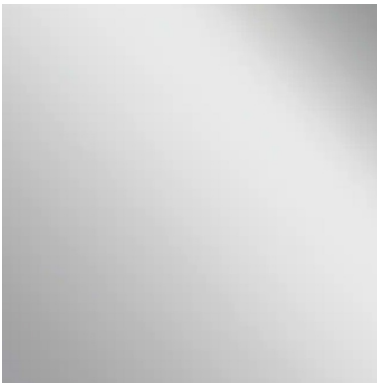
Product Maple Veneer with Polyback
Manufacture Wurth Wood Group
Link <https://www.wurthwoodgroup.com/Maple-Veneer-wi-Polyback/>
Location Classrooms, activity space, library, playroom
Sustainability Forest Stewardship Council
Purpose Cabinetry, furniture



Product Luxury American Oak Acoustic Slat Wood Wall Panels
Manufacture The wood veneer hub
Link <https://www.thewoodvenerhub.com/products/slatpanel-oak-acoustic-wood-wall-panels>
Location Library, activity space
Sustainability Lamella strips with a clean, modern appearance are mounted onto a uniquely designed, recycled acoustic felt material.
Purpose Wall Systems, furniture



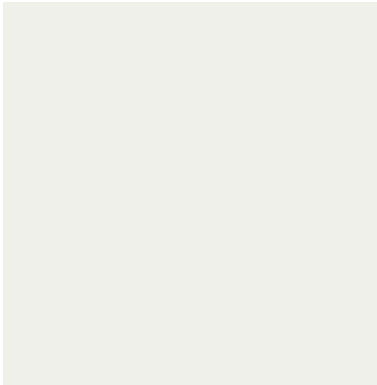
Product Display Panels
Manufacture Panel Processing
Link <https://www.panel.com/>
Location Classroom
Sustainability Manufactured in the U.S.
Purpose Wall Systems



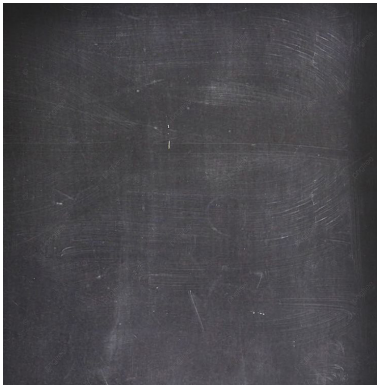
Product Mirror
Manufacture Acrylite
Link https://www.ttplasticland.com/collections/mirror-acrylic-sheets-1/products/custom_silver-mirror-acrylic-sheet?variant=16497627496514
Location Classrooms, playroom
Performance Mirror finish acrylic sheets are easy to saw or laser cut, drill, polish, heat bend, and route
Purpose Ceiling

SPEC BOOK

Product White Gloss
Manufacture Polyvision
Link <https://polyvision.com/product/wall-systems/>
Location Classroom, library, playroom
Performance Durable porcelain enamel surface
Purpose Easy to clean with minimal maintenance



Product Unframed Magnetic Chalkboard Sheet Material
Manufacture US Markerboard
Link <https://www.usmarkerboard.com/p/unframed-magnetic-chalkboard-sheet-material/45181>
Location Classroom, playroom
Performance durable and high-quality writing surface
Purpose Writing



Product Height adjustable desk ATTUNE
Manufacture AJ Products
Link <https://www.ajproducts.co.uk/office-conference/tables-desks/sit-stand-desks/straight-desks/height-adjustable-desk-530948-530946>
Location Classroom
Performance Multi-functional, versatile table with a height-adjustable frame, tilting top and locking castors.
Purpose Flexibility



Product Aeron Chair
Manufacture Herman Miller
Link <https://www.hermanmiller.com/products/seating/office-chairs/aeron-chairs/>
Location Administrative office
Sustainability Aeron is composed of more than 50 percent recycled material
Purpose Comfort + flexibility

Product Children's chair Helmi 37 without armrests
Manufacture Lekolar
Link <https://www.lekolar.se/sortiment/mobler-inredning/stolar/laga-barnstolar/utan-armstod/helmi/barnstol-helmi-37-utan-armstod/>
Location Classrooms, activity space
Sustainability Forest Stewardship Council
Purpose Seating



Product Front
Manufacture Offect
Link <https://www.offecct.com/product/font-12/>
Location Front desk, classrooms
Performance Font is a sofa system designed for Nationalmuseum
Purpose Comfort



SPEC BOOK

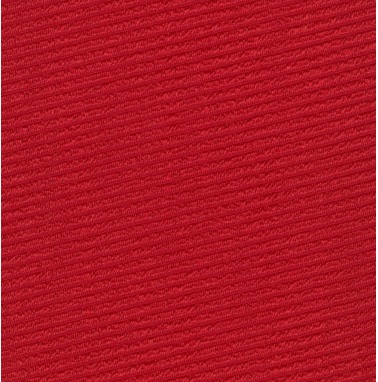
Product Finiré 3" LED Recessed Lighting - Round Adjustable
Manufacture Lutron Electronics Co
Link <https://market.bimsmith.com/product/Lutron-Electronics-Co-Inc/revit-bim-Finir-3-LED-Recessed-Lighting--Round-Adjustable-23006>
Location Gallery space, restrooms
Performance Dimming / Dimmer
Purpose Illuminate the gallery space



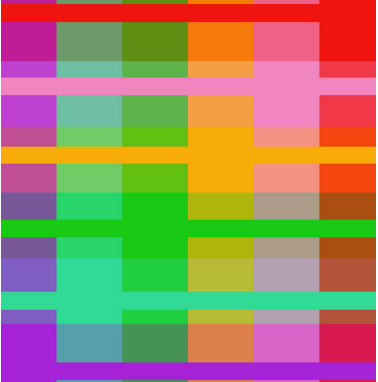
Product CLARA Transparent pendant lamp
Manufacture Faro Barcelona
Link <https://faro.es/en/collection/clara-transparent-pendant-lamp/>
Location Classroom, gallery space, activity space
Performance Ambient lighting
Purpose Illuminate the classroom and activity space



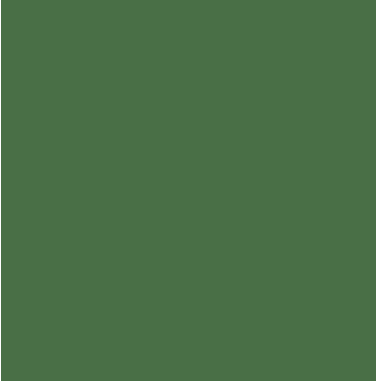
Product ELIA, Pendant, Oval
Manufacture Lumenwerx
Link <https://lumenwerx.com/en/product-line/elia/>
Location Library
Performance LED
Purpose Illuminate the library



Product Aaren
Manufacture Kvadrat
Link <https://www.kvadrat.dk/en/products/upholstery/8098-aaren?id=8098:::0553>
Location Classrooms, library, activity space
Performance High traffic private and office spaces: 15.000 – 25.000 rubs
Purpose Upholstrey



Product Chiffon + Cotton
Manufacture Custom Print Fabric
Link NA
Location Activity space, classroom
Performance Sheer fabric
Purpose Suspended sculpture + upholstery



Product UNI 5520 BC6 Light Green
Manufacture Ege Carpets
Link <https://www.egecarpets.com/carpet/uni-5520-bc6-light-green-1>
Location Library
Performance Virgin polyamide or 80/20 NZ wool/nylon blend
Purpose Flooring

FINAL

DELIVERABLES

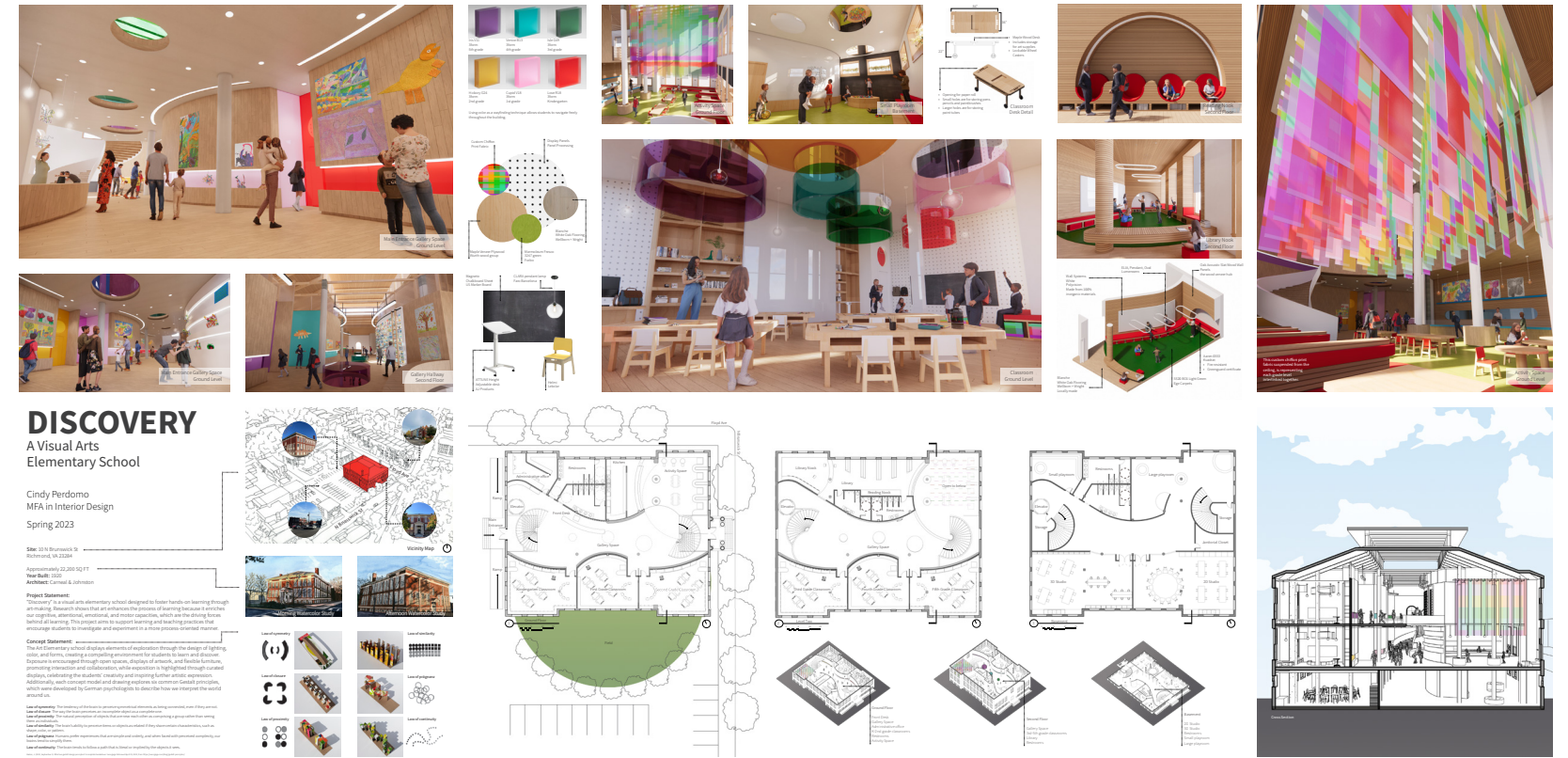


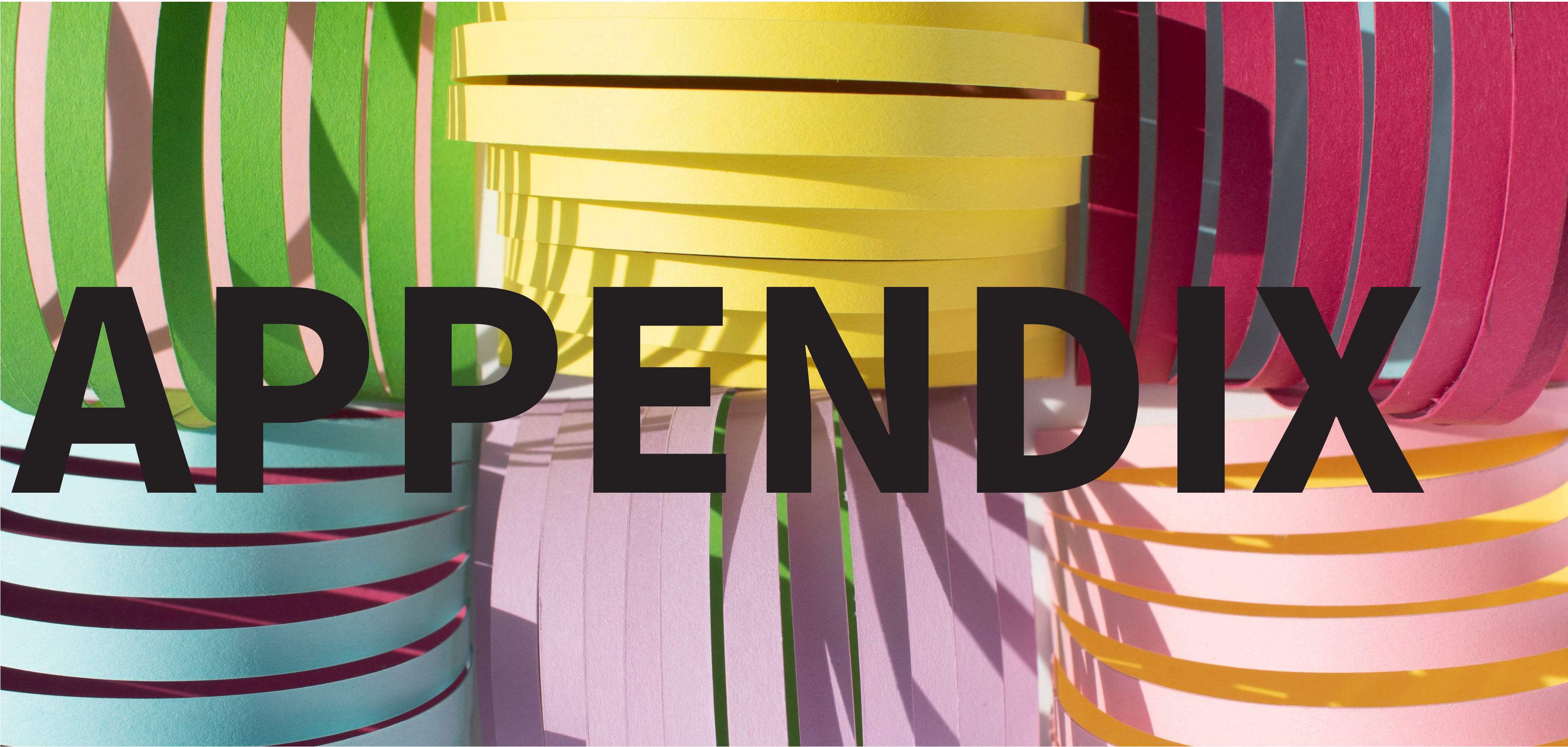
DECLARATION

Design is not exclusive to a select group of individuals; anyone can be a great designer as long as they possess empathy, intentionality, and curiosity. Design should not be taken too seriously; it should be enjoyable and whimsical. Great design should evoke curiosity, spark creativity, and foster communication among people. As designers, we have a moral obligation to create spaces that enhance our health and well-being, and we have the power to shape environments that lead to a more fulfilling life. Design can greatly impact our interactions and relationships with one another. Our surroundings are a reflection of our internal state, and an organized environment can have a positive effect on its users, while a chaotic one can lead to disarray. Therefore, it is crucial for designers to create spaces where people feel safe and supported. Design should have a sense of rhythm, beauty, and playfulness, as these elements contribute to its overall effectiveness.



THESIS PRESENTATION





APPENDIX

Acer. (2015). The Arts in Turkish Preschool Education. *Arts Education Policy Review*, 116(1), 43–50. <https://doi.org/10.1080/10632913.2015.970102>

Adams, & Atherton, F. (2018). Editorial: Young Children and Art Education. *The International Journal of Art & Design Education*, 37(1), 4–5. <https://doi.org/10.1111/jade.12188>

Baladehi, & Shirazi, A. (2017). Study of the Appropriate and Inappropriate Methods of Visual Arts Education in the Primary Schools According to the Types of Multiple Intelligences. *Tarih Kültür Ve Sanat Araştırmaları*

Dergisi, 5(4), 501–513. <https://doi.org/10.7596/taksad.v5i4.620>

Bautista, Moreno-Núñez, A., Bull, R., Amsah, F., & Koh, S.-F. (2018). Arts-related pedagogies in preschool education: An Asian perspective. *Early Childhood Research Quarterly*, 45, 277–288. <https://doi.org/10.1016/j.ecresq.2017.12.005>

Fabri, & Fortuna, S. (2020). Maria Montessori and Neuroscience: The Trailblazing Insights of an Exceptional Mind. *The Neuroscientist (Baltimore, Md.)*, 26(5-6), 394–401. <https://doi.org/10.1177/1073858420902677>

FRIERSON. (2016). Making Room for Children’s Autonomy: Maria Montessori’s Case for Seeing Children’s Incapacity for Autonomy as an External Failing: Making Room for Children’s Autonomy. *Journal of Philosophy of Education*, 50(3), 332–350. <https://doi.org/10.1111/1467-9752.12134>

Hursen, & Islek, D. (2017). The effect of a school-based outdoor education program on visual arts teachers’ success and self-efficacy beliefs. *South African Journal of Education*, 37(3), 1–17. <https://doi.org/10.15700/saje.v37n3a1395>

Kahn, Weiss, T., & Harrington, K. (2018). Modeling Child-Nature Interaction in a Nature Preschool: A Proof of Concept. *Frontiers in Psychology*, 9, 835–835. <https://doi.org/10.3389/fpsyg.2018.00835>

Leung. (2020). Teachers’ belief-and-practice gap in implementing early visual arts curriculum in Hong Kong. *Journal of Curriculum Studies*, 52(6), 857–869. <https://doi.org/10.1080/00220272.2020.1795271>

Lummis, Morris, J. E., & Lock, G. (2016). The Western Australian Art and Crafts Superintendents’ advocacy for years k-12 Visual Arts in education. *History of Education Review*, 45(1), 115–130. <https://doi.org/10.1108/HER-12-2014-0045>

Marijana Županić Benić. (2016). Findings of Visual Arts Research in Early Childhood and Primary Education. *Revija za elementarno izobraževanje*, 9(4), 55–63.

Nestor, & Moser, C. S. (2018). The importance of play. *Journal of Occupational Therapy, Schools & Early Intervention*, 11(3), 247–262. <https://doi.org/10.1080/19411243.2018.1472861>

Pataky. (2020). “Do not touch it!”. Today’s children’s visual competencies in comparison with the pre-digital era in light of their art educational environment. *CEPS Journal*, 10(4), 75–96. <https://doi.org/10.26529/cepsj.925>

Phillips, Gorton, R. L., Pinciotti, P., & Sachdev, A. (2010). Promising Findings on Preschoolers’ Emergent Literacy and School Readiness In Arts-integrated Early Childhood Settings. *Early Childhood Education Journal*, 38(2), 111–122. <https://doi.org/10.1007/s10643-010-0397-x>

Rushton, Juola-Rushton, A., & Larkin, E. (2010). Neuroscience, Play and Early Childhood Education: Connections, Implications and Assessment. *Early Childhood Education Journal*, 37(5), 351–361. <https://doi.org/10.1007/s10643-009-0359-3>

Schoevers, Leseman, P. P. ., & Kroesbergen, E. . (2020). Enriching mathematics education with visual arts: Effects on elementary school students’ ability in geometry and visual arts. *International Journal of Science and Mathematics Education*, 18(8), 1613–1634. <https://doi.org/10.1007/s10763-019-10018-z>

Selan, & Potočnik, R. (2020). Art, for Children’s Sake! At the Crossroads of Making, Understanding and Teaching Visual Art. *CEPS Journal*, 10(4), 7–11. <https://doi.org/10.26529/cepsj.1050>

Terreni. (2017). Visual Arts Education for Young Children In Aotearoa New Zealand. *Journal of Childhood Studies (Prospect Bay)*, 41(4), 50–. <https://doi.org/10.18357/jcs.v41i4.16718>

Todhunter-Reid. (2019). In-school arts education and academic achievement: A child fixed effects approach. *Arts Education Policy Review*, 120(2), 112–119. <https://doi.org/10.1080/10632913.2018.1423595>

Van de Kamp, Admiraal, W., van Drie, J., & Rijlaarsdam, G. (2015). Enhancing divergent thinking in visual arts education: Effects of explicit instruction of meta-cognition. *British Journal of Educational Psychology*, 85(1), 47–58. <https://doi.org/10.1111/bjep.12061>

Vojvodić, & Sredanović, J. (2020). Methodological aspects of the implementation of Printmaking in Pre-school, Primary and Secondary education. *Arte, Individuo y Sociedad*, 32(2), 451–466. <https://doi.org/10.5209/aris.64206>

Zupancic, Cagran, B., & Mulej, M. (2015). Preschool teaching staff’s opinions on the importance of preschool curricular fields of activities, art genres and visual arts fields. *CEPS Journal*, 5(4), 9–29. <https://doi.org/10.26529/cepsj.111>

DESIGN ETHOS P07

Image 1 India Mahdavi, 2022 photograph, <https://www.wallpaper.com/>

Image 2 Daniel Sanderson, photograph, <https://www.sandersonstudios.co.uk/#/evering-road/>

Image 3 Minima, photograph, <https://www.minimaonline.com/bathrooms-linen-closets>

Image 4 Snøhetta, 2019 photograph, <https://www.snohetta.com/projects/summit>

Image 5 Patkau Architects, 2016 photograph, <https://montecristomagazine.com>

RESEARCH EXPANSION P09-11

Image 1 Dinosaur collage, 2013 collage, <https://hannahsartclub.wordpress.com/2013/04/22/shape-o-saurus-dinosaur-collage-2-april-2013/>

Image 2 Mothers Day Drawing, Drawing, <https://www.carrera.de/m/en/magazine/bathroom/head/special-mothers-day-gift-ideas.html>

Image 3 untitled, painting, <https://www.pinterest.com/pin/158189005638872099/>

Image 4 Untitled, 1933, oil on canvas, <https://www.etsy.com/listing/1112820722/paul-quee-untitled-wall-print-stretched>

Image 5 Butterfly, Drawing 2016, <https://briefingpapers.co.nz/working-conditions-in-the-early-childhood-education-sector/>

Image 6 Drawing, <https://www.fondazionebarilla.com/en/education/>

Image 7 Dinosaur collage, 2013 collage, <https://hannahsartclub.wordpress.com/2013/04/22/shape-o-saurus-dinosaur-collage-2-april-2013/>

Image 8 untitled, painting, <https://www.pinterest.com/pin/158189005638872099/>

PRECEDENT STUDIES P13-17

Image 1-4 Loop Kindergarten by SAKO Architects Photograph 2013, <https://www.dezeen.com/2013/04/25/loop-kindergarten-in-tianjin-by-sako-architects/>

Image 5 -8 Elementary/ Middle School Tali Design, 2018 photograph, <https://www.archdaily.com/896683/lishin-elementary-school-library-tali-design>

Image 9-12 Malvína Day Nursery Prague, 2021 photograph, <https://www.dezeen.com/2021/04/18/no-architects-malvina-day-nursery-prague-interior/>

PROGRAMMING PRECEDENT STUDIES P51-53

Image 1-3 Borgafjellet Elementary School LINK arkitektur, 2021 photograph, <https://www.archdaily.com/981078/borgafjellet-elementary-school-link-arkitektur>

Image 4-6 Brown Point Elementary School TCF Architecture, 2018 photograph, <https://www.archdaily.com/984647/browns-point-elementary-school-tcf-architecture>

ACKNOWLEDGMENTS

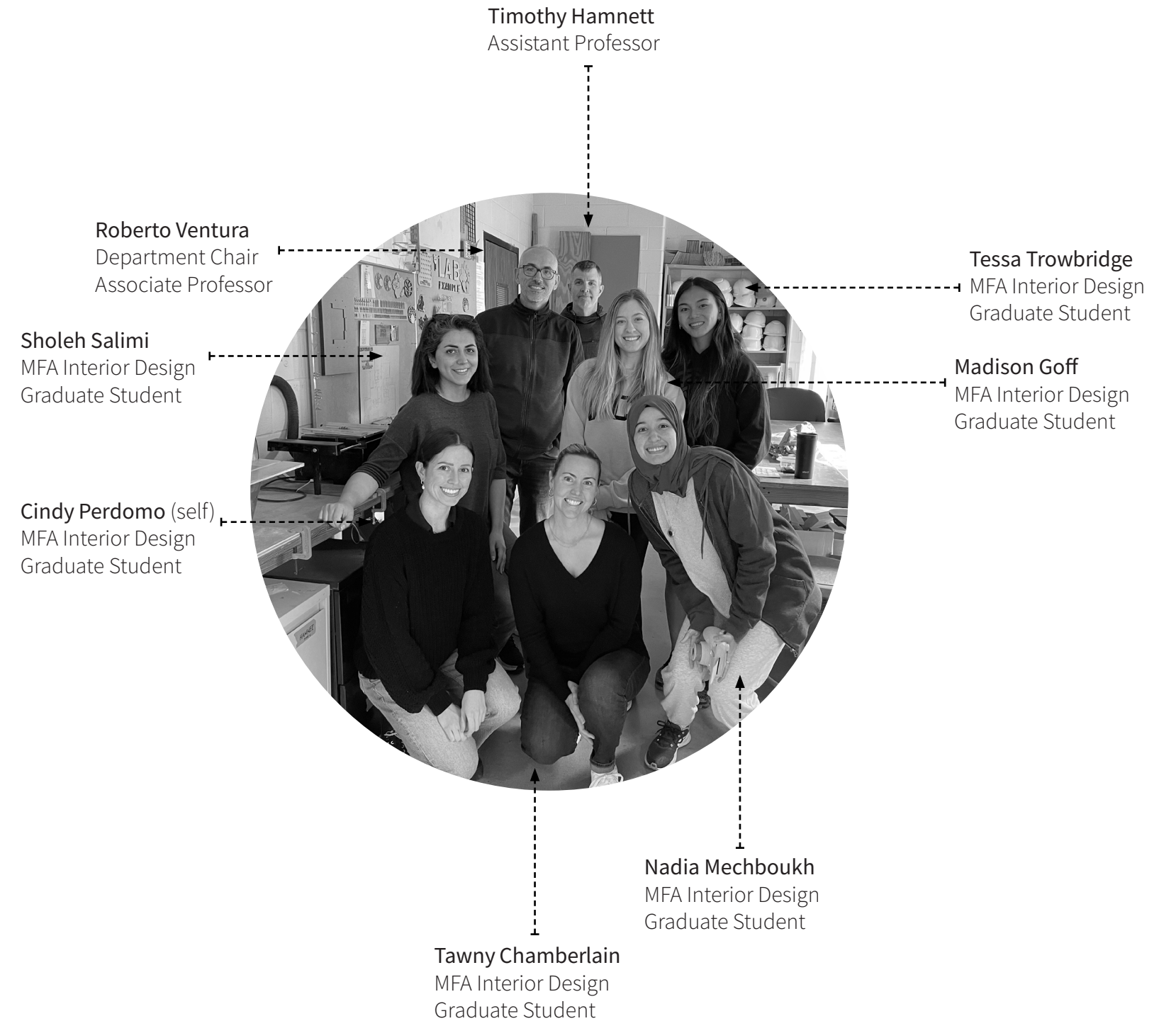
I would like to thank all of my wonderful professors who have helped me throughout my time at VCU. Thank you, Emily Smith, for teaching our class on the importance of sustainability and advocating for us to design accessible spaces. Thank you to Kristin Carleton for being direct and thoughtful when it came to receiving feedback on our projects. Thank you to Tim Hamnett for teaching our Revit class in a digestible way as well as starting off the class with inspiring projects. Thank you to Rob Ventura for keeping us on track during our thesis project. We all valued your support and your sense of humor.

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Front Entrance
to Classrooms

THANK YOU