

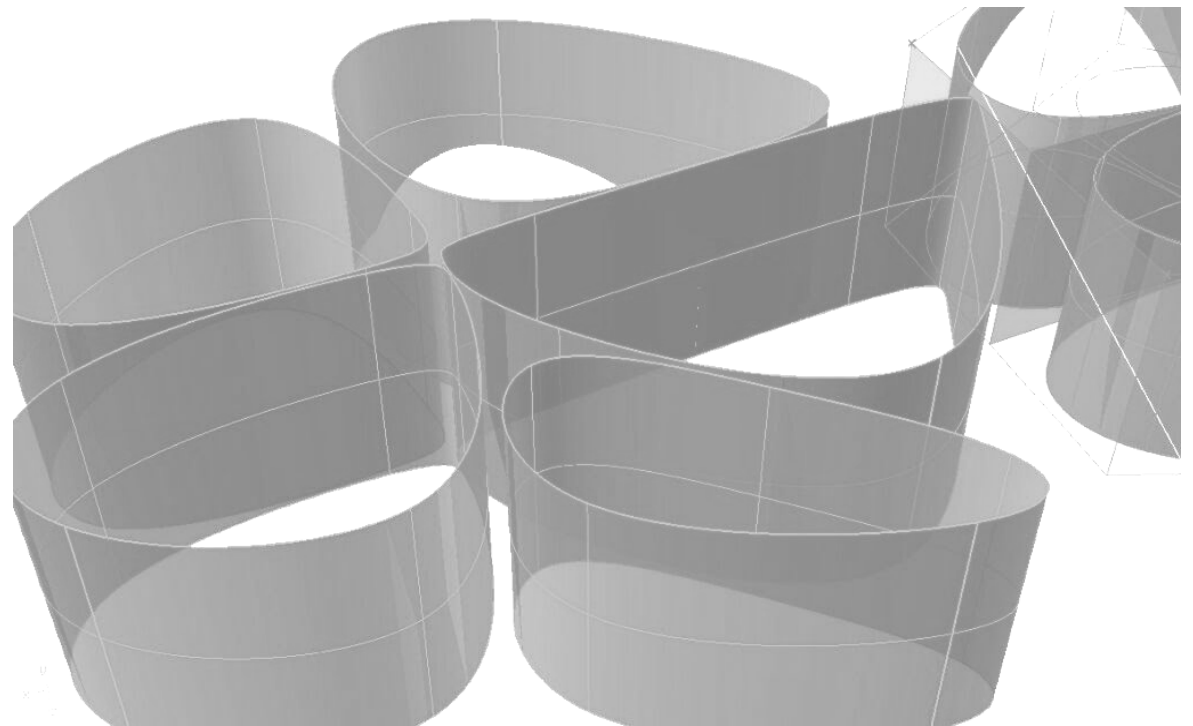


REFLECTIVITY
MIDDLE SCHOOL

MARTA GALEK | THESIS 2011
HARRINGTON COLLEGE OF DESIGN

INTRO

The **current setting for most educational facilities** lies in un-inspired environments -It is time to form a **community approach to learning and interacting through design** in Middle School.



AIM

Why Middle School?

To not only design aesthetically pleasing environments but to effectively help to **change the design of the environments in which we live, work, and learn**

What is missing in traditional
public school classrooms?

TRADITIONAL CLASSROOM

"Mainstream American Education tends to ignore the peculiarities of places in order to standardize the experiences of the students"

-National Art Education Association

MIDDLE SCHOOL CONTRAST

"Culture of Information"

Immediacy

Networked Culture

Driven Culture

Social culture



"The climate of a developmentally responsive middle level school is safe, inviting, and caring; it promotes a **sense of community and encourages learning.**"

The National Middle School Association

This We Believe, 1995

CONTRAST IN THE CLASSROOM

Old



Traditional Public school

vs.

New



Montessori Classroom

CULTURE OF MIDDLE SCHOOL

Jaana Juvonen, from *Educational Psychologist*, writes: "this intermediate phase [of middle school] has been identified as contributing to the disengagement and increasing sense of alienation of youth".

What is missing many times is the idea of belonging, and interest in the experience of learning.

MONTESSORI THEORY

What is Montessori?

Aim: "To create a structured environment for learning, making extensive use of didactic materials. Materials are designed to be self-correcting, emphasizing children's' **contact with learning** rather than judgments or interventions of teachers"

Dennis Schapiro, *Education Digest*

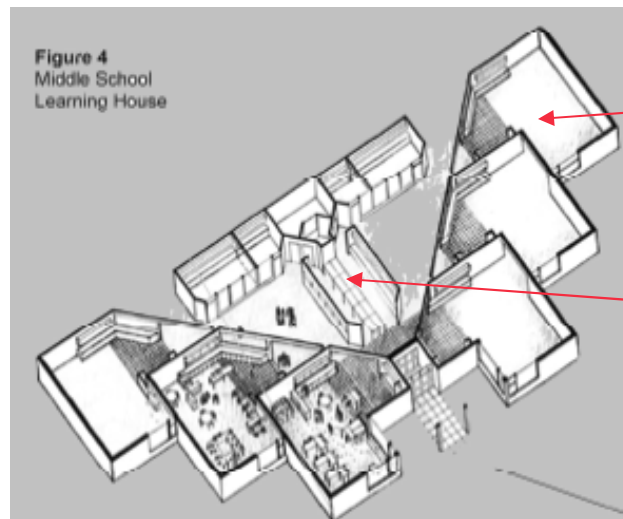


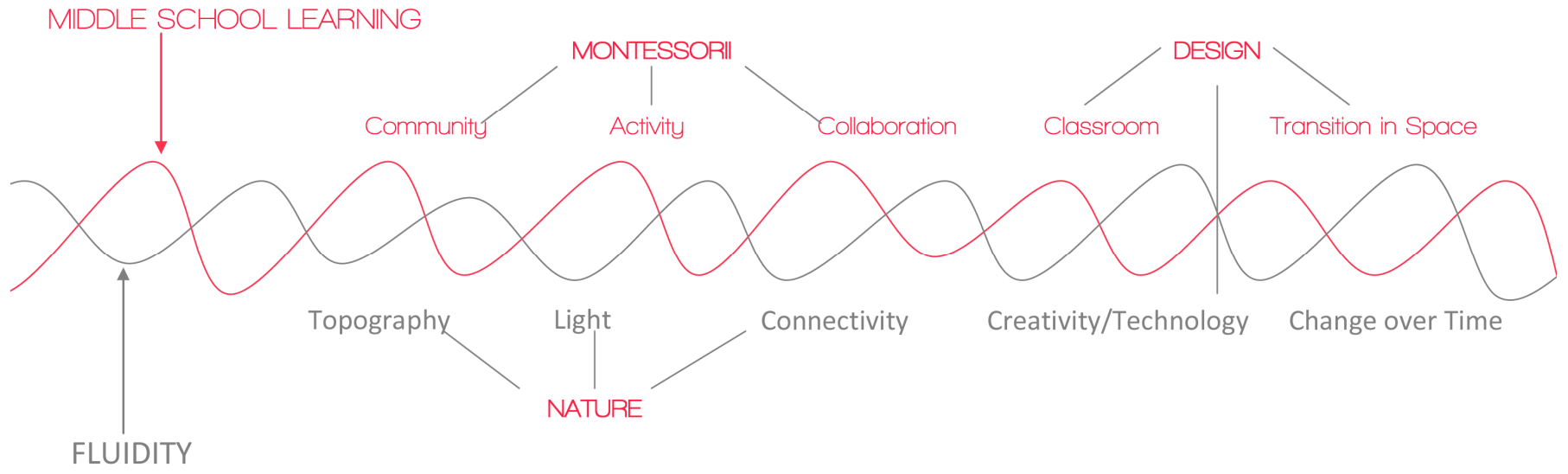
Figure 4
Middle School
Learning House

L-Shaped
Classroom

Outdoor
Classroom

Relatedness to Reflectivity: Using Montessori Methods of learning and environments, to create a **flowing and natural learning environment**

DESIGN LINEAGE



IDEALISMS

Reflectivity

Material properties
The ability to reflect; Quality of spaces,
Reflecting memories

Connectivity

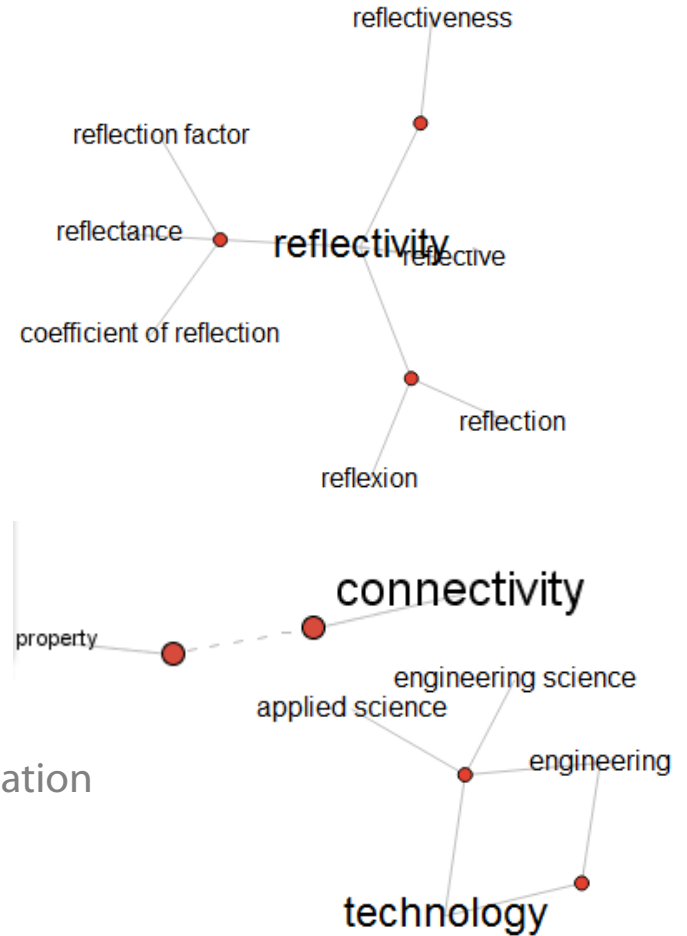
Interactivity of spaces, program, history
Looking at Montessori for driving the flow
of spaces
Belonging – feeling part of a team, community
Collaboration – Open classrooms

Technology

Bridging the gap between new & old systems of education
Integration of subjects to embrace technology
Activity Spaces

Nature

Providing outdoor space for learning & activities
Community involvement with projects & planting
Bringing in light through a fluid design

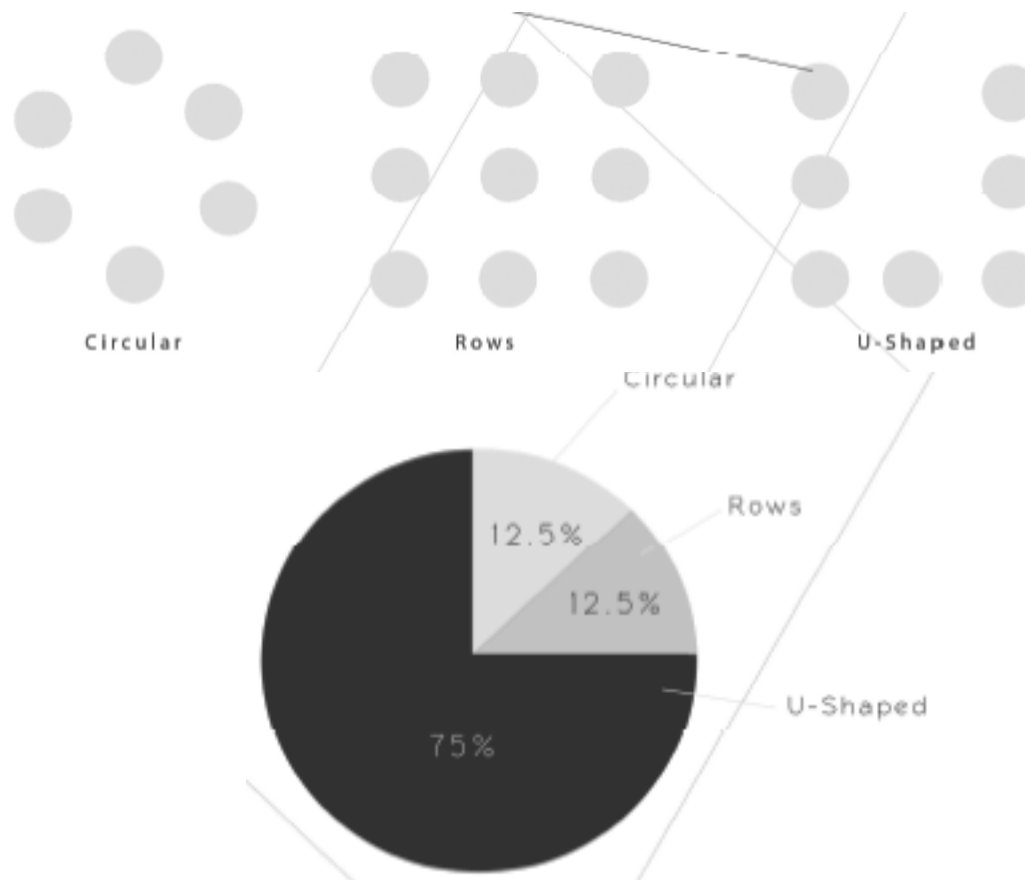


DESIGN THEORY

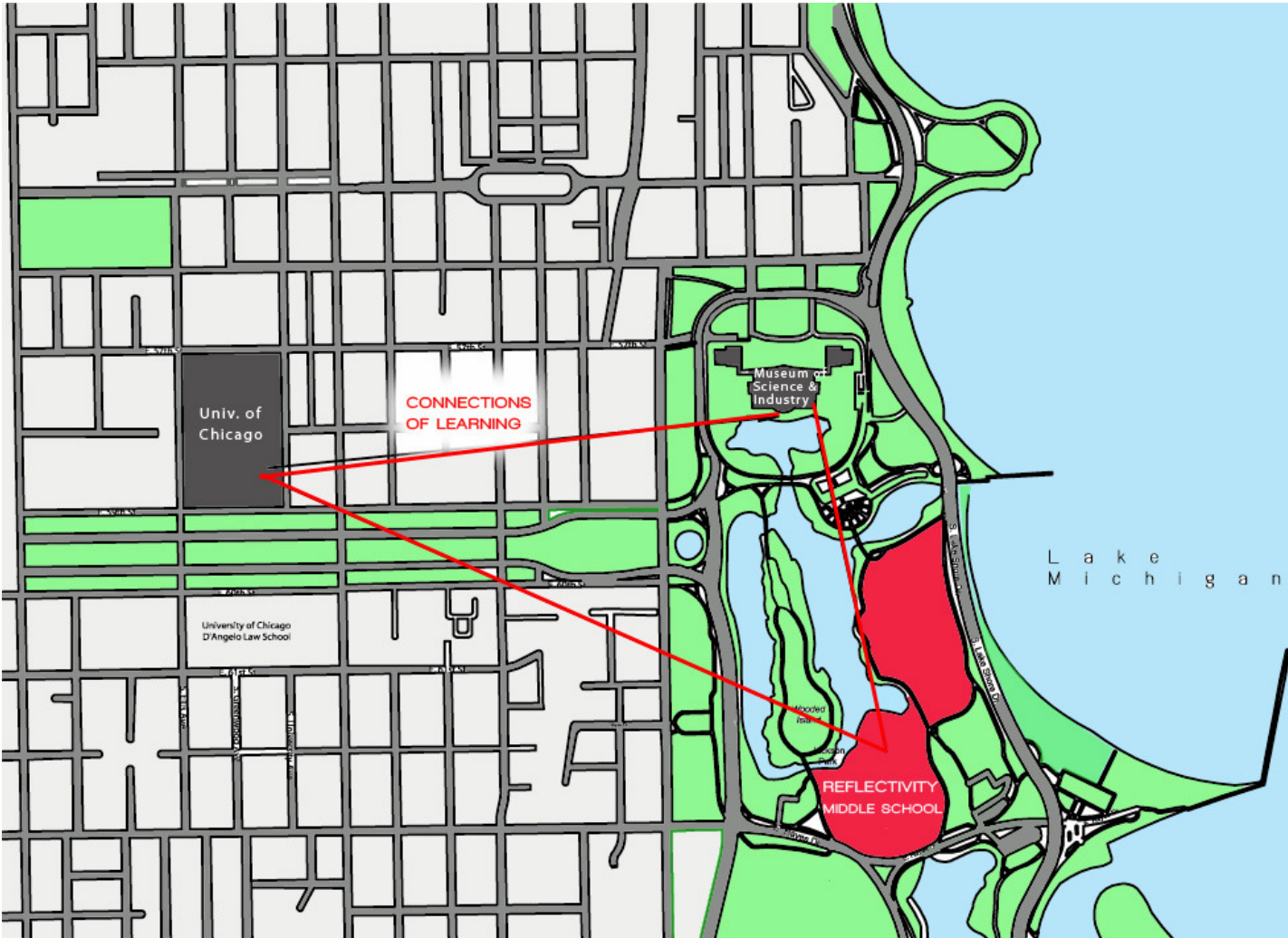
Traditional Classroom	Montessori/Cluster	Reflectivity Middle School
<p>Linear Classroom</p> <p>↓</p> <p>Tight</p> <p>↓</p> <p>Follow the curriculum</p> <p>↓</p> <p>Disconnected</p> <p>↓</p> <p>Closed</p>	<p>Clustered classrooms</p> <p>↓</p> <p>Looser</p> <p>↓</p> <p>'Follow the child'</p> <p>↓</p> <p>Collaborative</p> <p>↓</p> <p>Open</p>	<p>Ecology of information + technology</p> <p>↓</p> <p>Sustainable approach</p> <p>↓</p> <p>'Expression of Montessori</p> <p>↓</p> <p>Ecology of art education, a complex, fluid system of learning</p> <p>↓</p> <p>Education follows nature</p>

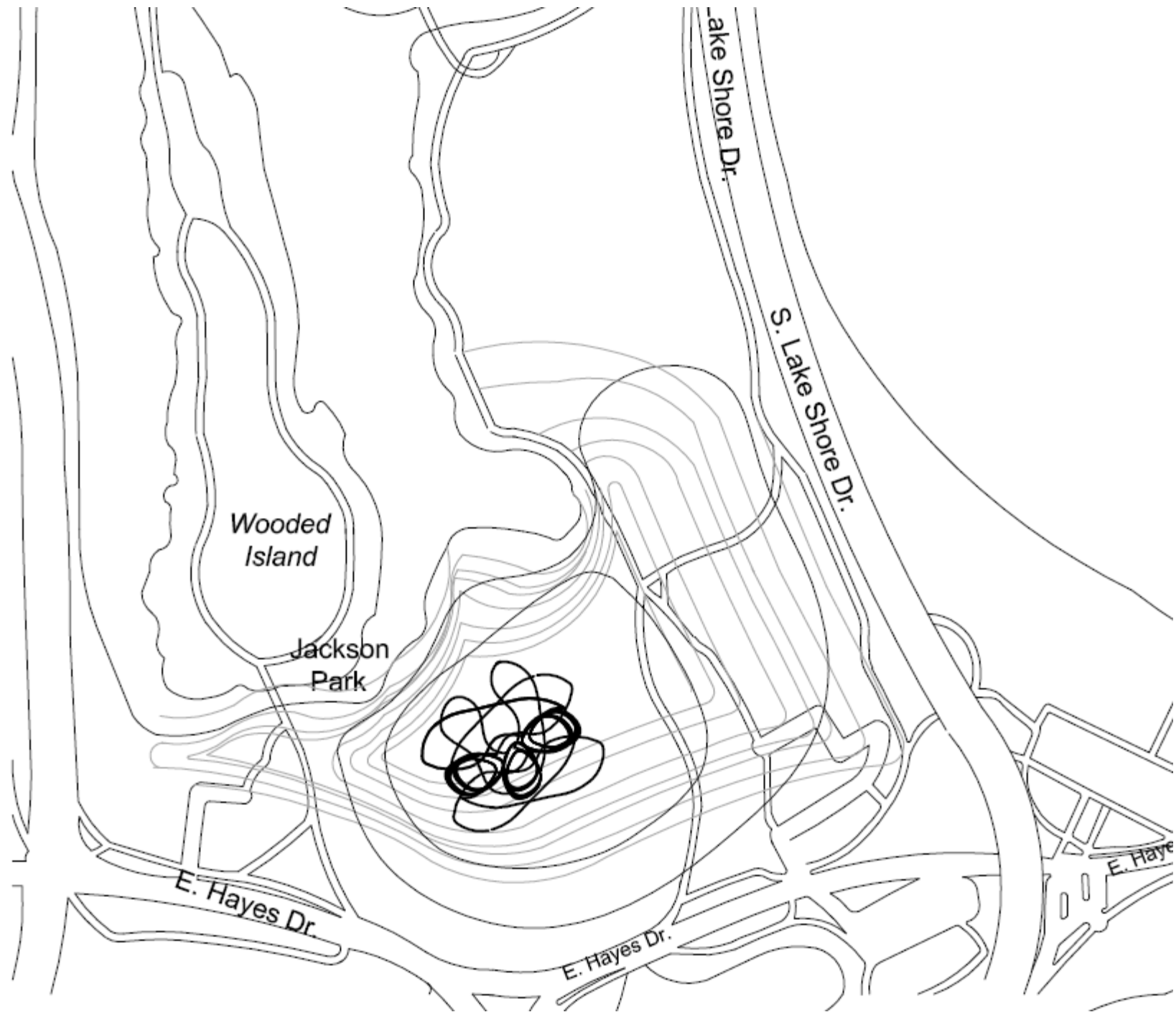
CLASSROOM RESEARCH

Which type of seating arrangement is preferred among Middle School students?



SITE DESIGN





TARGET CONNECTIONS

- Target – School Boards, Jurisdictions
- Main focus: Middle-school aged children (11-14 yrs old)
- Connection to adjacent Museum & University
 - Museum of Science & Industry
 - University of Chicago

TARGET DESIGN



SCIENCE



MATH



HISTORY/
GEOGRAPHY



ART/DESIGN



PHYS. ED.



LUNCHROOM



RESTROOMS



LIBRARY/ENGLISH



SECURITY



TEACHER QUARTERS



COMPUTER LAB



GREENHOUSE

ADJACENCY DESIGN

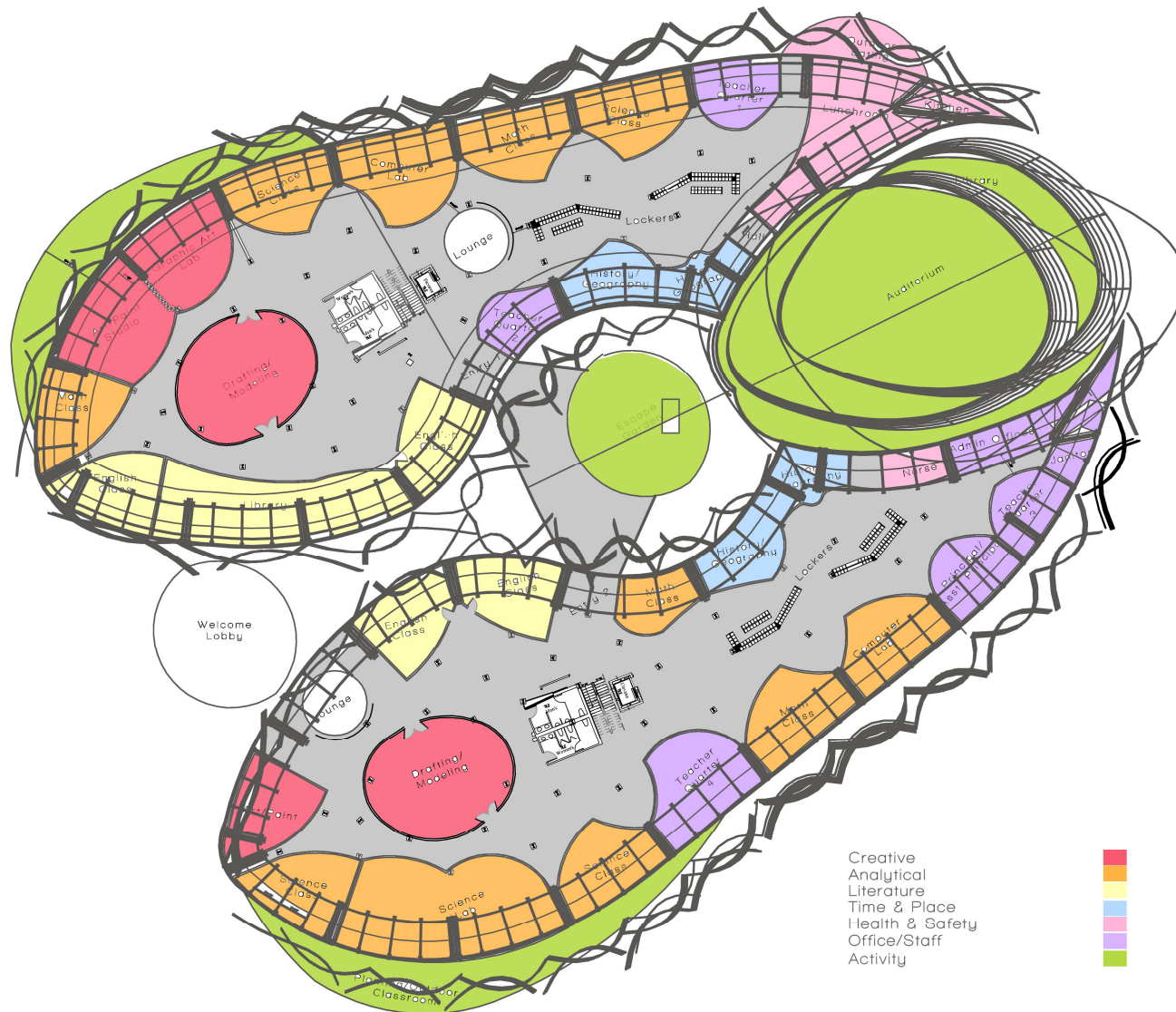
REFLECTIVITY MIDDLE SCHOOL

LEGEND																							
Adjacent:	■																						
Convenient:	■																						
Non-Adjacent:	■																						
SUBJECT CATEGORIES																							
Creative	■																						
Analytical	■																						
Literature	■																						
Time & Place	■																						
Health & Safety	■																						
Office/Staff	■																						
Activity	■																						
		Art & Painting Studios	Graphic Art Lab	Drafting & Modeling Lab	Science Lab	Science Classrooms	Math Classrooms	Computer Lab	English/Vocabulary Classroom	History/Geography Classroom	Library	Lunchroom	Greenhouse	Gym	Restrooms	Teachers Quarters (Inc. Restrm)	Nurses' Office	Staff/Admin. Offices	Principal/Asst. Principal	Janitors	Mechanical/Electrical	Security	Auditorium
Art & Painting Studios																							
Graphic Art Lab																							
Drafting & Modeling Lab																							
Science Lab																							
Science Classrooms																							
Math Classrooms																							
Computer Lab																							
English/Vocabulary Classroom																							
History/Geography Classroom																							
Library																							
Lunchroom																							
Greenhouse																							
Gym																							
Restrooms																							
Teachers Quarters (Inc. Restrm)																							
Nurses' Office																							
Staff/Admin. Offices																							
Principal/Asst. Principal																							
Janitors																							
Mechanical/Electrical																							
Security																							
Auditorium																							

ADJACENCY DIAGRAM

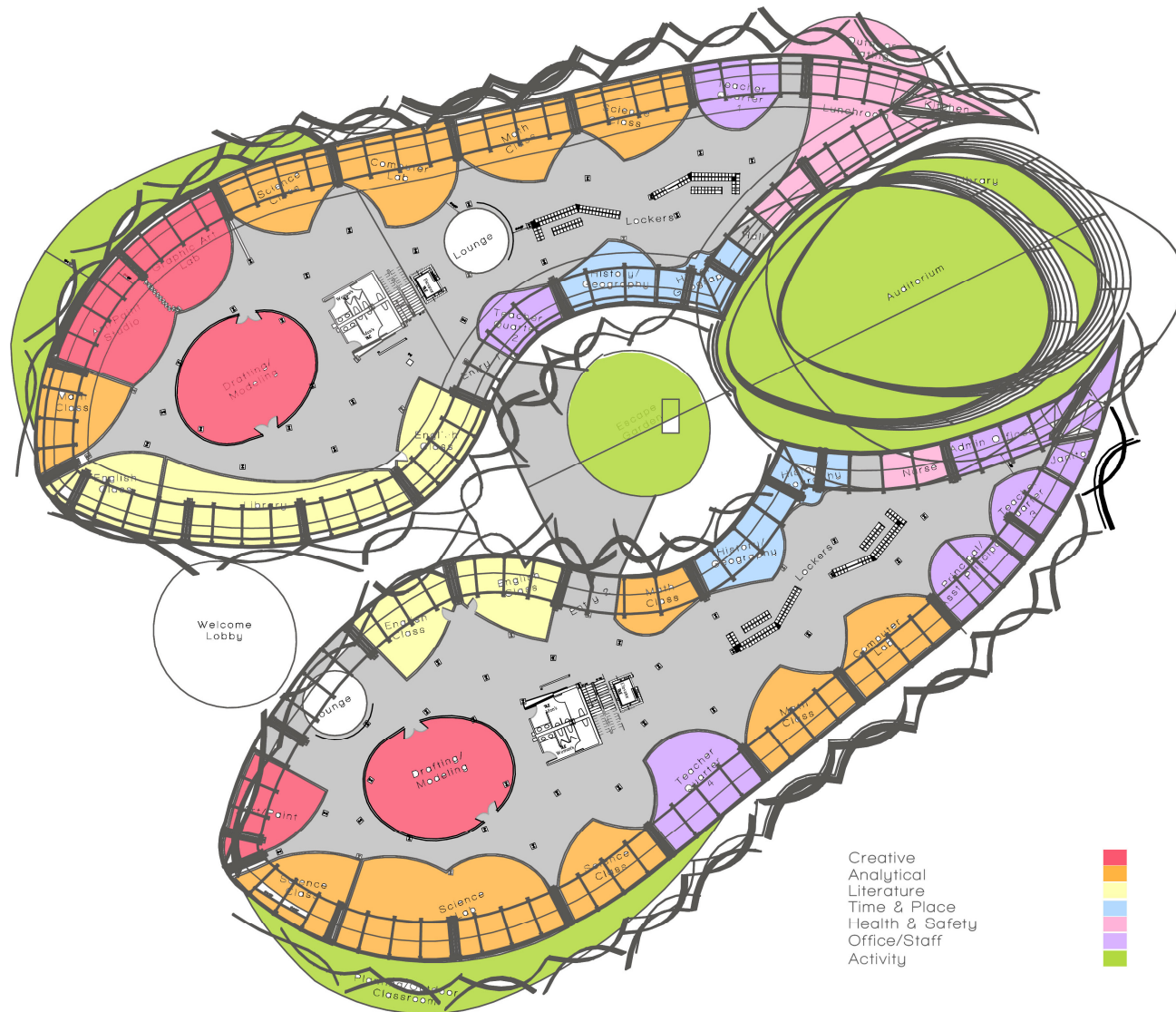
TARGET DESIGN

- 1ST Floor



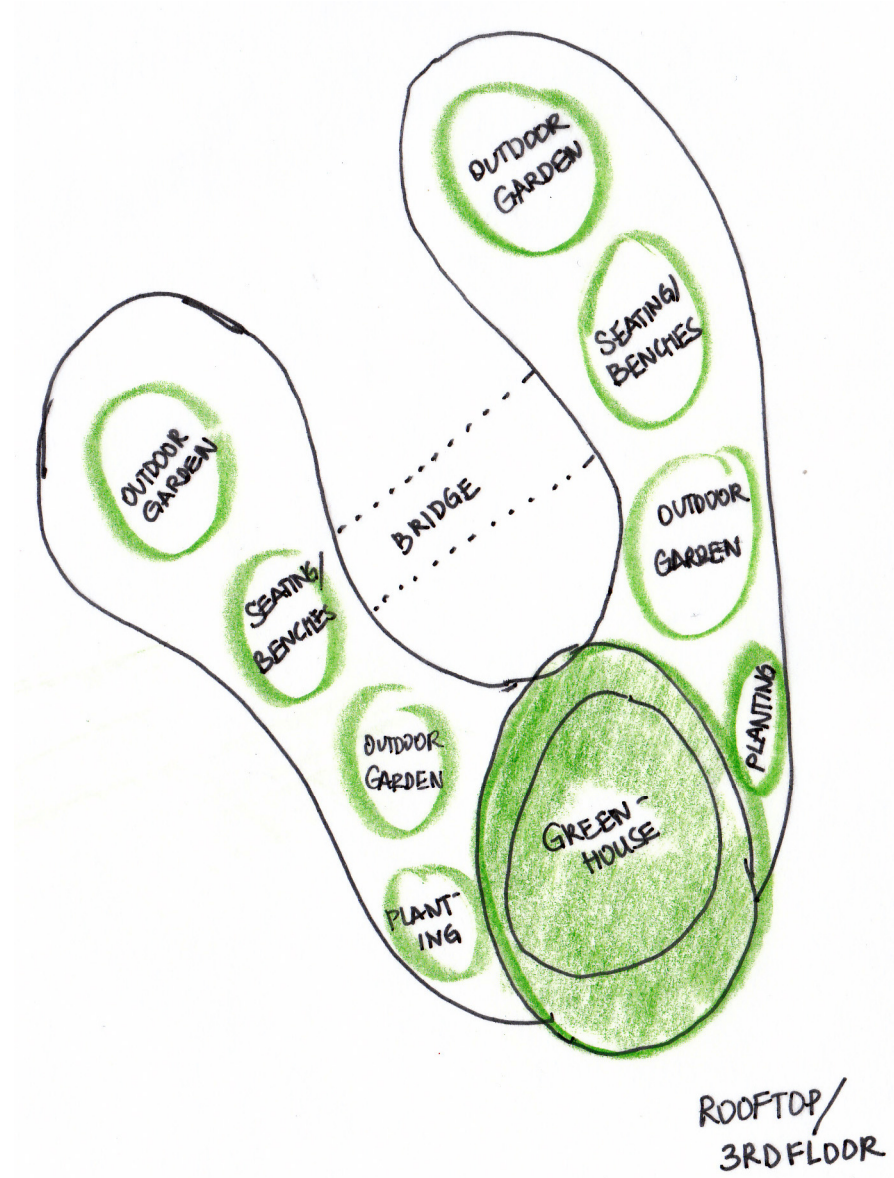
TARGET DESIGN

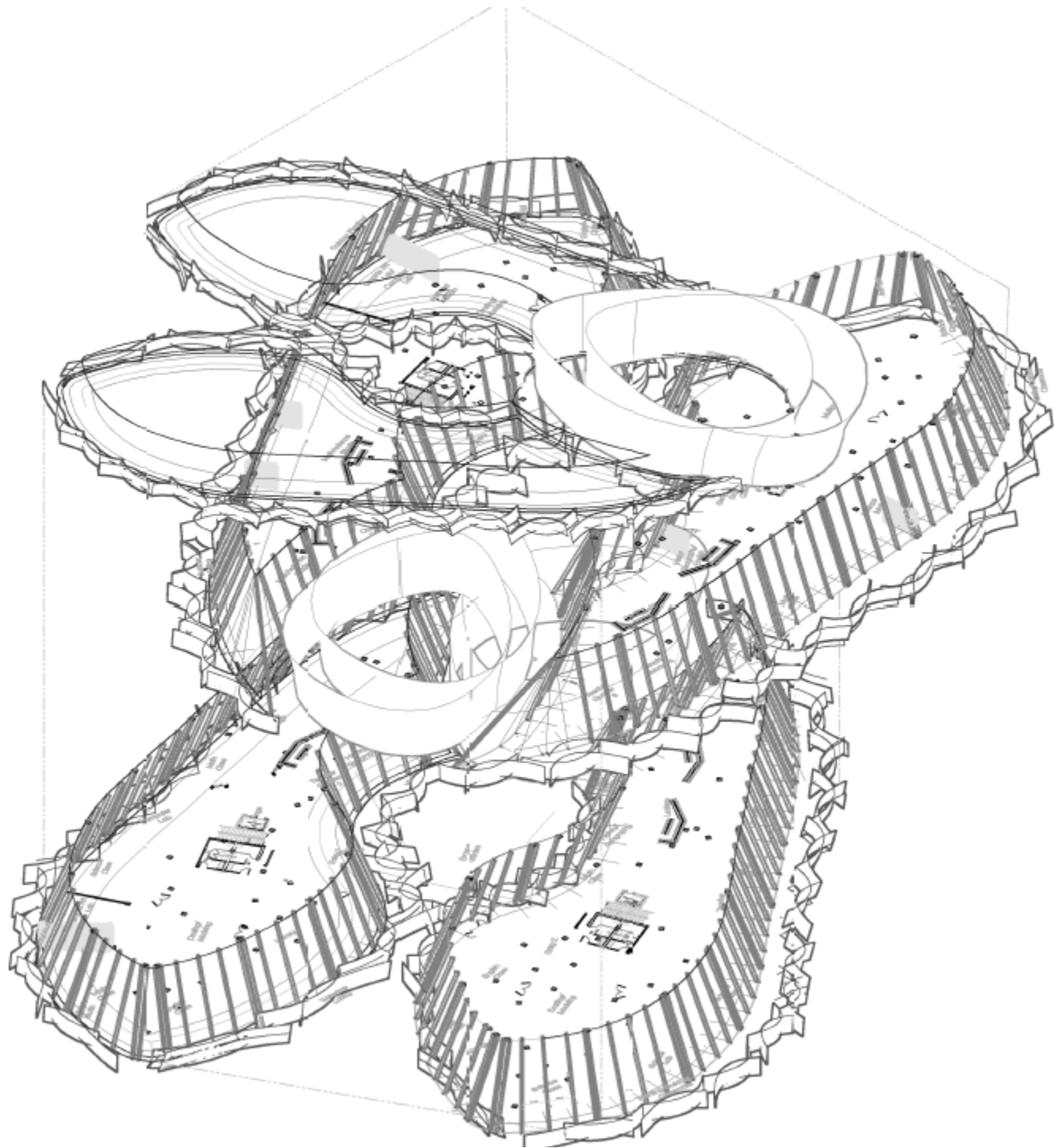
- 2nd Floor



TARGET DESIGN

- 3RD FLOOR





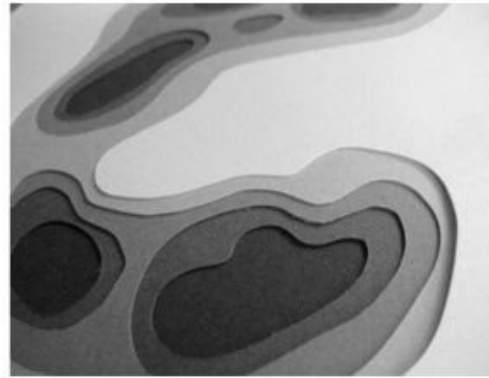
TARGET DESIGN

LAYERS + TOPOGRAPHY

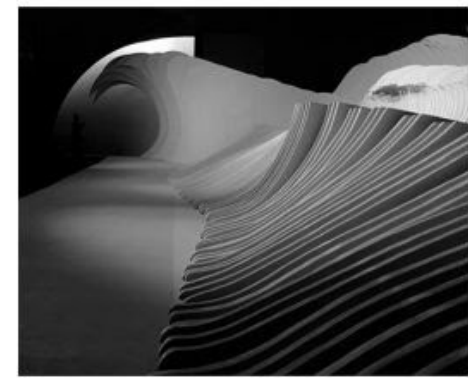
A closer look at how topography and layers will shape the new Middle School classroom - through an integration of nature and movement. Some inspiration to further the design:



"several-parallel-layers" (Interior Zine)



"Topography1" (amerrymishap blog)



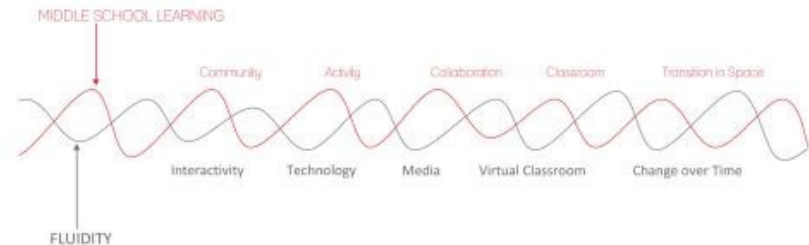
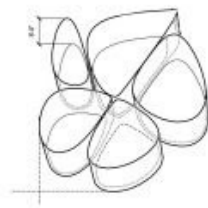
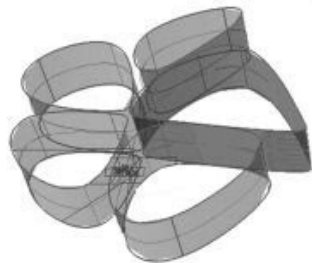
Muti Randolph, topography-like installation

Looking at layers of the earth, I will position the new 'Reflectivity' Middle School on different levels of topography, in order to give a sense of movement, fluidity and complexity. The aim is to bring about a new school that marries an open and collaborative platform with an overlay of technology. The topography will aid in the positioning of the school's classrooms, in order to give not only a distinct appearance, but a completely new take on sustainability and nature.

It's time to put the students closer to nature - and learn through collaboration with technology and each other.

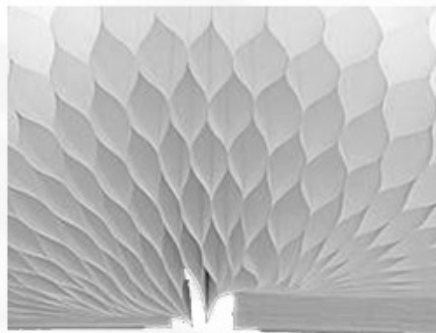
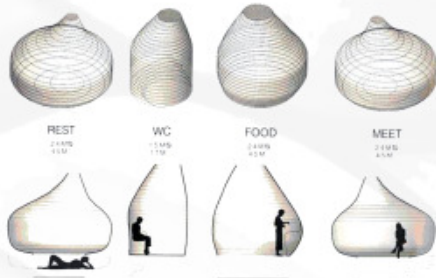
A classroom 'cluster'

A closer look at how topography is flowing from the topography into the interior - also following a fluid system of learning, as seen in the below diagram.



TARGET DESIGN

NATURE + TEXTURE

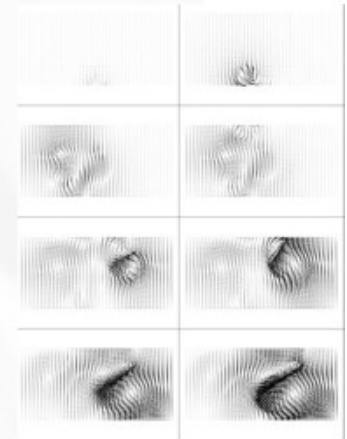
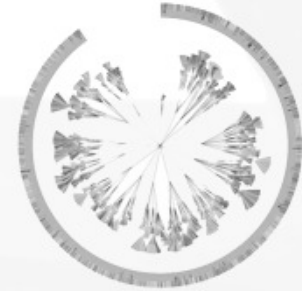


My style inspiration comes from a mix of nature & textures. Although I like to keep my layout clean, I want it to speak in a dramatic way when it is presented. I like to bring in elements of surprise, and I want to do this through a play between the elements on a page.

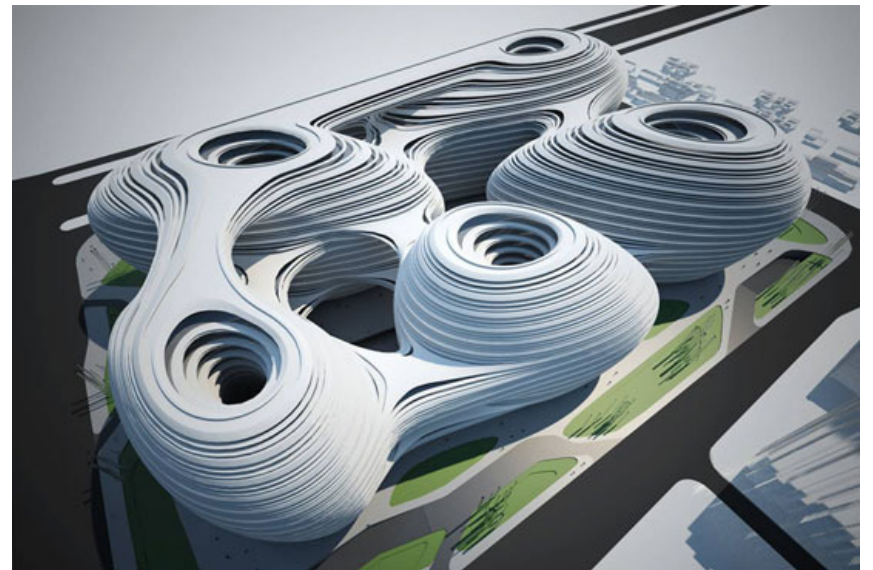
Going through iterations and styles for the poster layout, I have come across some ideas for the functionality and definition of the elements. The identity I am trying to portray relays itself as a communication tool for explaining the details behind the design on the poster, through different tools and methods. Being that the poster is reflecting a school design proposal, I want to bring in a scholarly visual, so that it looks straight-forward and easy to read and understand. Through the use of a base color and an accent color, I am looking to use markers on the page for ease of communication and interest throughout the page. This, in a nutshell, describes some of the technical ways I am communicating the design and layout.

Looking further into the aim of the changing poster, I am looking at ways to improve the communication of the elements amongst each other. First, I am looking at the "boxy" layout before starting the change. I want the look to be clean, but not too rigid. The concept behind 'Reflectivity Charter School' is to blend nature and education, in a marriage of flowing patterns naturally occurring in nature. The roof structure of the school is modeled after a wind pattern, and the topography is a formation of grassy waves, with water coming into the layers. By bringing in the three natural elements of wind, light, and water, I want to have a direct connection in the graphic representation of the poster.

The next steps are changing the background image. Although I feel it adds to the overall picture, it should have a more direct "punch". I will also put some more color highlights into the roof structure, to accentuate it more. I feel these changes will add to the interest and visual style of the poster, and will communicate more effectively. I will continue to search for other graphic styles & inspirations to enhance the graphic identity of my work.



Case Study #1:
Zaha Hadid

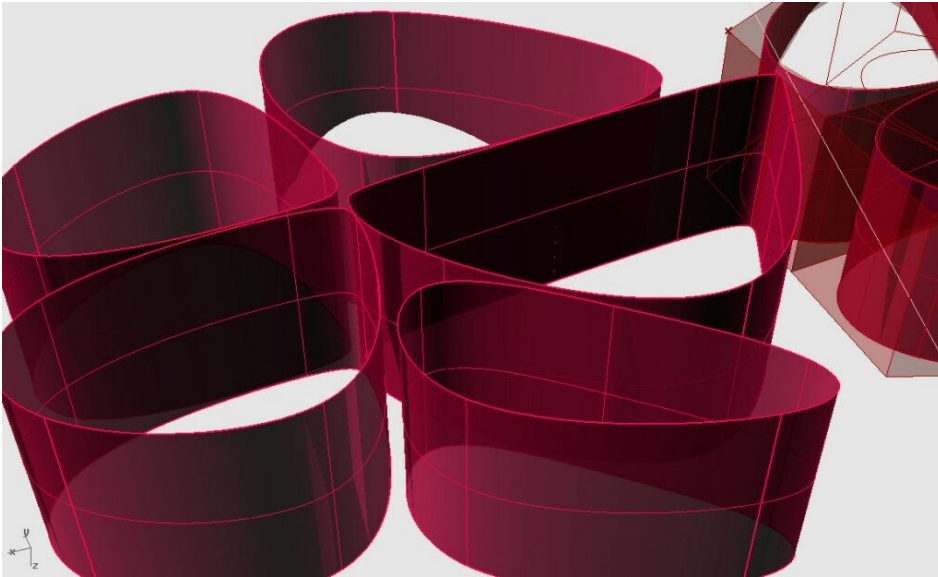


Case Study #2: SmithGroup



TESTS

- Clustering of classrooms
- Renderings



CLASSROOM RESEARCH

- Go into importance of daylight in a learning environment
 - Mention study done in UIC
- Need for a connection to nature and the outdoors
 - Get a study on this as well

CLASSROOM MATERIALS

CLASSROOM FURNITURE