University of Colorado at Denver

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Denison Montessori
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Montessori Philosophy

The elegance of the Montessori method resides in the encouragement of children to develop according to their own natural schedule, so to speak. Regardless of learning abilities, social status, and maturity, the Montessori method allows each individual child to develop a thought process that is most natural and unique to them. Unlike public school classroom settings where the teacher dictates to students, Montessori style classrooms allow students to explore based on their individual interests and rates of learning. The teacher simply acts as a guide along their journey, presenting new thoughts and questions that continually ignite each student’s interests. This freedom of exploration assists in building self assurance within each student as they progress through their academic years and beyond. Perhaps equally as important as this strong build of character and assertiveness, is the gentle encouragement of loving to learn. It is indeed a rare opportunity that a child is given the opportunity to learn based on their own terms, interests, and styles.

Denison Elementary

Located within the Mar Lee neighborhood, Denison Elementary provides a unique classroom experience that utilizes the Montessori teaching method. Layered on top of this diverse method of teaching is Denison’s status as a magnet school. Each morning a student body extending across several neighborhoods of Denver arrive to classrooms that consequently provide a rich mix of age groups and cultures.

Within the walls of Denison Elementary, one can stroll down the hallway to observe all unique principles of Montessori and a uniquely talented, curious student body. However, this school and student-body identity stops at the doors and windows. Upon stepping into the landscape, students and visitors alike are greeted with a barren landscape, void of all the curiosity and intense imagination that resides within each student. The landscape provides no moments for interest or a yearning to learn more. Dominating the ground plane is a drastic spread of pea gravel and a large patch of asphalt that offers faded courts of four square and basketball. Given only this for a playground, students are provided little choice in their daily recess experience.

Context Photos

- Strip mall along west side of school grounds.
- Stream running along Sanderson Gulch Trail.
- Collection of children under shade of willow tree.
- Entrance of Sanderson Gulch Trail. Located to the northeast of the school.
Considering the severe site conditions, the design concept is driven by the need for a varied playground experience where students can independently explore new spaces just as they independently unfold topics of interest in the classroom.

Initially the design is based on a primary and secondary datum that stretches north-south and east-west respectively. These datums act primarily as organizing elements that set up connections across the site through a series of varying elements within the site plan. Layered over these two datums is the concept of the Japanese Tea Garden layout. This overlay dovetails into the school’s value system of overall balance (both intellectually and spiritually) in and among students and teachers alike. Originally, it had been proposed to place a Zen garden near the existing global garden in order to enhance the school’s wish for an international theme. This design takes a less obvious approach to the tea garden, by merely applying the design principles, and the not the design itself. Design principles applied through several iterations were as follows:

- Combinations of 3, 5, 7 for all elements and spaces
- Connections between spaces achieved by means of visual, textural, structural, and material design
- Overall application of asymmetry and balance. The most common and obvious examples being balance of light and dark, asymmetrical design on the vertical and horizontal plane, use of the Golden Mean for spatial relationships.

Project Goals

1. Provide spaces that connect to the Montessori teaching philosophy, allowing for continuity throughout the experience of the school and playground. These spaces should encourage curiosity, love of learning, and relentless imagination.

2. Provide multiple pockets of space that exist as multipurpose spaces. Spaces and program elements should maintain several layers of character and meaning that assist in creating healthy thought processes and imaginative play.

3. Create transition zones between elements of the site. This includes but is not limited to the building, program elements, and surrounding community.

Program Elements

The following diagrams and drawings were created by means of the Montessori philosophy, design intent, and project goals. Neatly folded into these three contributors, are the program elements which were utilized to further enhance the sum of the parts. They are as follows:

1. Welcoming Entrance - Primary and secondary access for students and community members.
2. Local/school art application throughout the playground.
3. Boulder Field
4. Outdoor Classrooms - Multipurpose
5. Shade Structure - Material should be ‘natural’
6. Natural Habitat - Colorado Foothills Theme
7. Zen Garden
8. Multipurpose Athletic Field
9. Buffer between alley and school grounds
10. Swings
11. Crusher Fines Running Track
12. Quiet Space for Class or Individual Reading
13. More Hardsurface Play
14. Grass!
After completing a series of analysis drawings, two site plans were created with varying concepts in order to explore multiple design possibilities. This concept applied the use of the 3 zones with a gathering space occurring between the play and community zones.

In this site plan, the tea garden design principles were applied as an overlay to the three zones of use. Spaces were laid out according the Golden Mean and organized asymmetrically according the two major datums previously mentioned.

A combination of the two was created, highlighting the strengths within each. In this drawing the zones still hold and the layout is asymmetrical and balanced within the principles of the Golden Mean. Circulation in this drawing developed in to a curvilinear form, accommodating the nature of youth, and establishing yet another layer to the layout.
The plant palette for the natural habitat was used across the site to establish another layer of connection between each space. The groundcovers running along the borders of the athletic field consist of the Colorado Foothills project that the student body has been researching for the past month.

During the fall season the original datums are brought to attention for a brief period to remind guests of the power of changing seasons.

The experience of the bosque of ornamental trees is heightened during the spring season when blossoms come in to play. This application of non-native plant material was used to further enhance the idea of asymmetry and balance; opposite seasons activating opposite plant material and space.

The application of large expanses of tree canopy was used to enhance the experience and variance of play spaces. In this case hardscape play, otherwise exposed to the sun, is shaded entirely by a bosque of spring blooming ornamentals. Larger shade trees were placed parallel to the school to achieve a transition space between the classroom and playground, and establish as visual connection between the learning zone and the play zone. Equally as important as the canopy of a tree, is the bark. Variation of tree bark provides an opportunity to explore the many textures within trees of our environment.
GAME TABLES/OUTDOOR CLASSROOM AND HARD SURFACE PLAY SECTIONS

GAME TABLES/OUTDOOR CLASSROOM
Not to Scale

BALANCE OF SHADE TO LIGHT
Not to Scale
Wave Field by Maya Lin

Pearl Street Plaza in Boulder, CO.
Soccer Field in Quebec, Canada.

Native Grass Display at Denver Zoo

Native Grass Display at Confluence Park in Denver, CO.
READING

TRANSITION

COMMUNITY

VIEWING PLAY

Library

Play Area

Transition Area

Study Area

Gathering Area

Gathering Area
GENERAL SITE SECTION
Not to Scale