

TRIPLE PEAKS MONTESSORI

M. Arch Thesis Design by Alexander P. Jansen



View from Backside of School

Description of Thesis

Blending architecture with landscape is not a new feature in design. For the Montessori schooling system, directly relating the natural world into the school's methods of teaching is crucial for the development of children. This thesis connects the two ideas in an iterative method catering to the child's memory, experience, and the ability to explore freely within limits of safety and ingenuity.

The project is designed for children ages 3 to 12, set up in multi-age groupings for peer learning, uninterrupted blocks of work time, and guided choice of work activity, as the Montessori system adorns. Dr. Maria Montessori believed that teacher, child, and environment create a learning circle for the child, prepared by the teacher, while encouraging the independence they need to prepare themselves for the world of adolescence.

By creating artificial space for a Montessori school, the designer must be aware of the needs of the people occupying the volume and the needs around them. The program, though, changes culturally and locally. In Alexandria, MN, the specific site was chosen to imbue the needs for a region giving children the ability to maneuver through the site's landscapes in a real and experimental way.

Project Criteria

- Blend architecture into the landscape while minimally impacting the visual heaviness of the site.
- Design a school that meets (and exceeds) the needs and goals set out by the AMS (American Montessori Society) fostering memory and experience.
- Develop a design that is site specific through an iterative process.
- Maximize opportunity for child-based learning by giving the children:
 - the proper indoor and outdoor spaces they need to explore, learn, and grow
 - freedom to explore around the site within the limits of a safe environment

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The Meaning of the Site

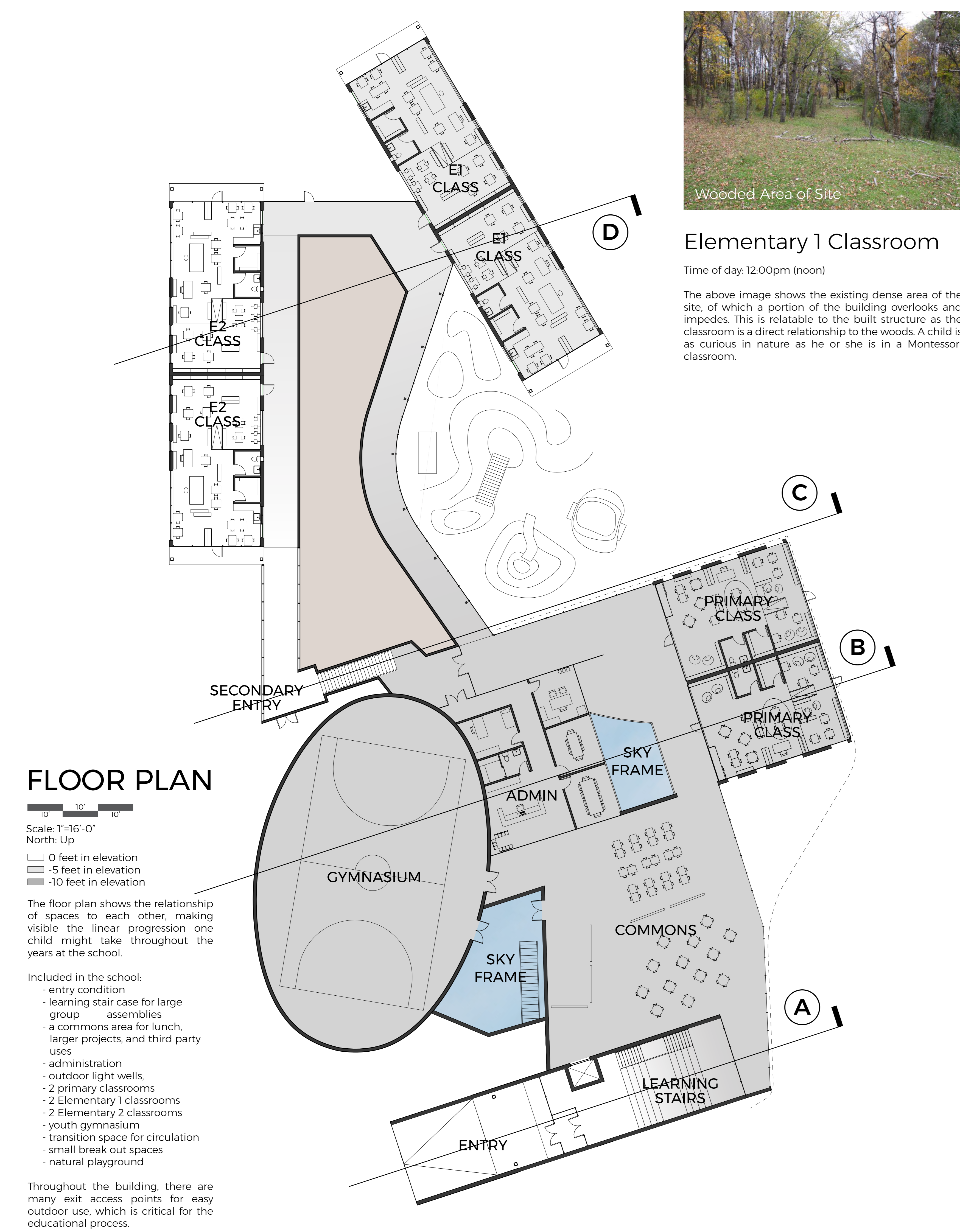
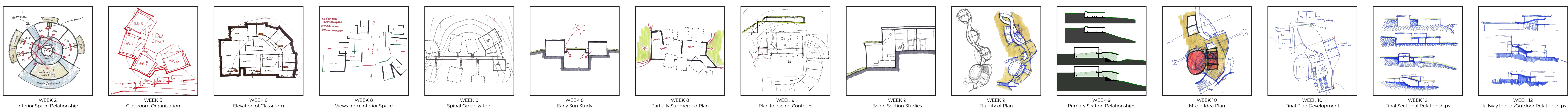
To begin how one experiences the site can be measured in the upbringing of a flower. As a seed is planted and through its life, it slowly grows and blooms. Similarly, in a child's educational life, it starts from birth as a curious baby, growing in knowledge with rudimentary tasks to abstract ideas.

For the architecture of the site, the school progresses linearly much like the life of a flower. The youngest level classroom (Primary) is located on the main level, which is submerged partially underground. As the child grows and in knowledge, he or she moves to an elder classroom, raised in elevation, until the path ends where one can contemplate their experience at the school at the highest point on the site.

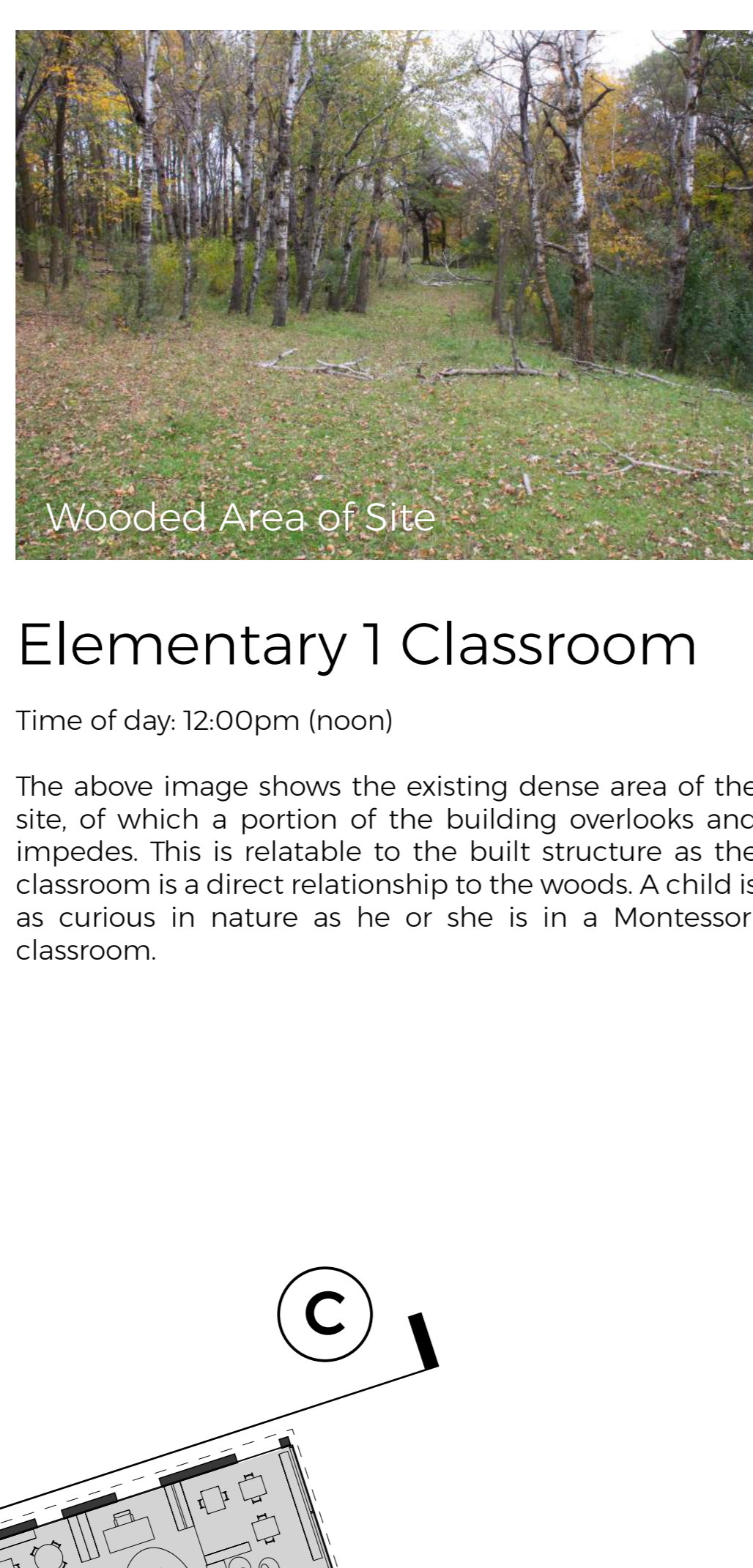


ITERATIVE DESIGN

Through the process of an iterative method, design decisions were made from crucial developmental points as discussed in small critique. This process, as shown from left to right, shifted from working strictly in floor plan to section cut, as the section became as important as the plan to develop the relationship between building and landscape.



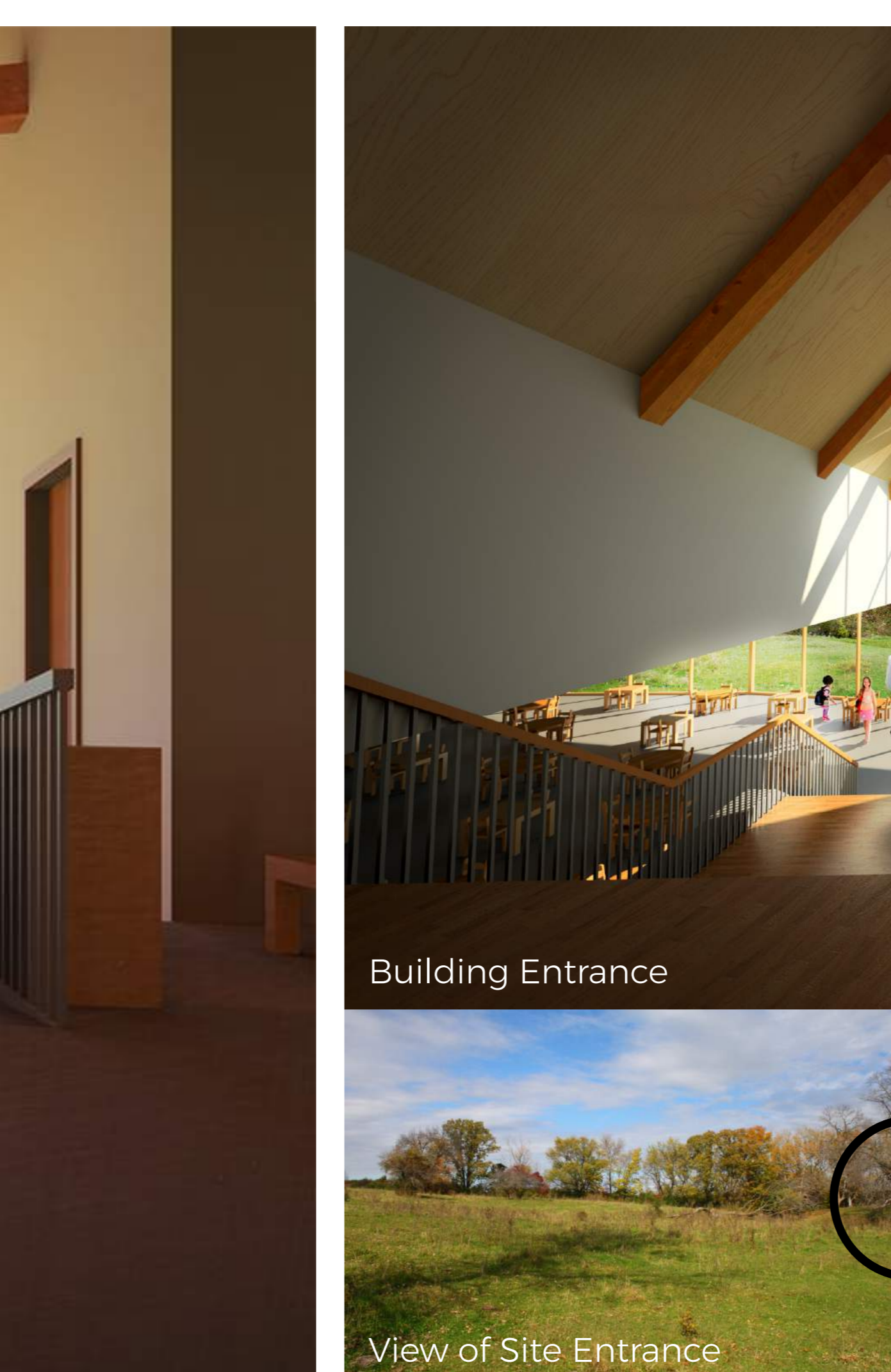
FLOOR PLAN
Scale: 1/16" = 1'-0"
North Up
0 feet in elevation
5 feet in elevation
10 feet in elevation
The floor plan shows the relationship of spaces to each other, making visible the linear progression one child might take throughout the years at the school.
Included in the school:
-entry condition
-learning stair case for large group assemblies
-commons area for lunch, larger projects, and third party uses
-administration
-outdoor light wells
-2 Elementary Classrooms
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-youth gymnasium
-transition space for circulation
-small break out spaces
-natural playground
Throughout the building there are many exit access points for easy outdoor use, which is critical for the educational process.



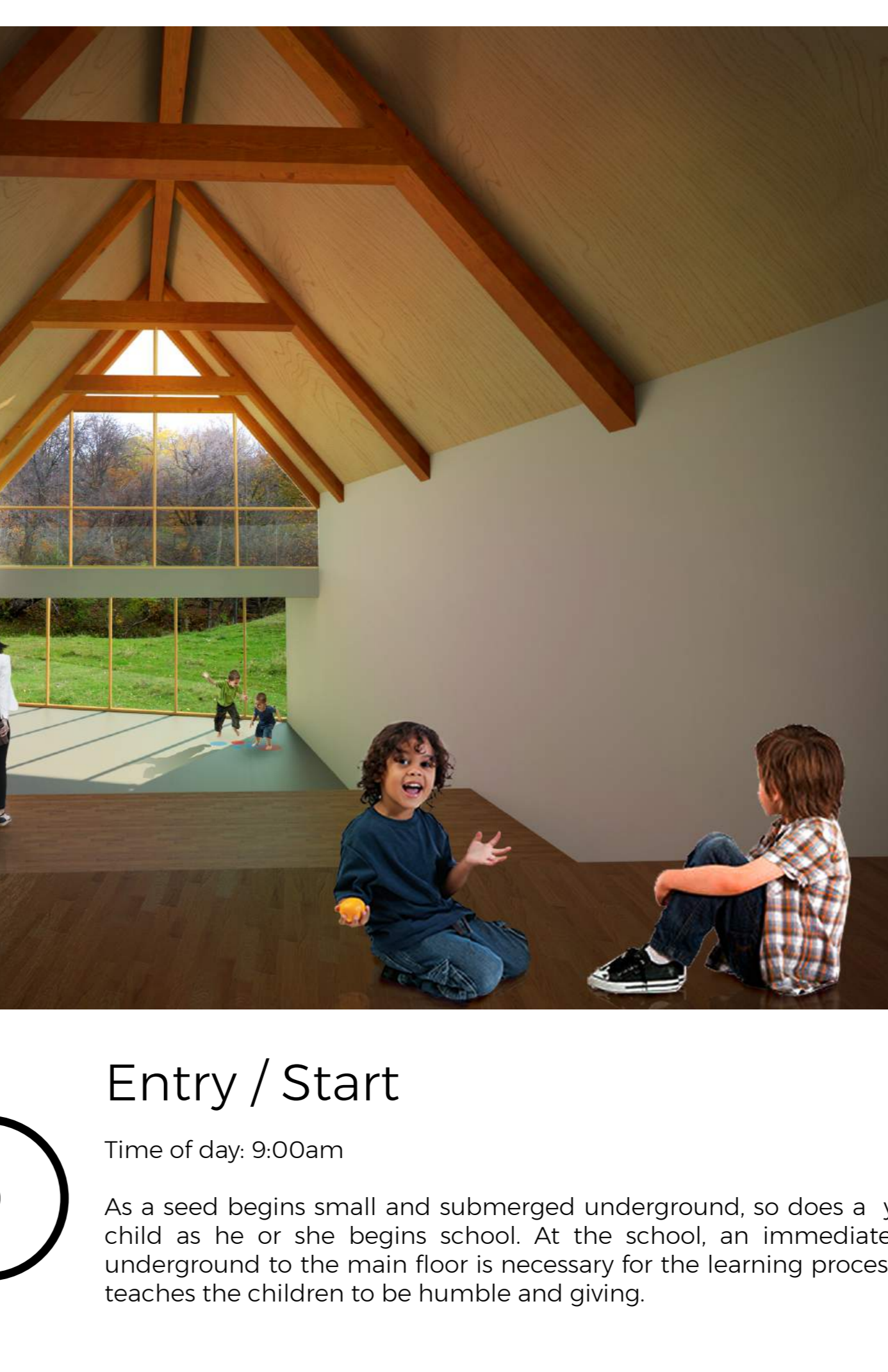
Elementary 1 Classroom
Time of day: 12:00pm (noon)
The above image shows the existing dense area of the site, of which a portion of the building overlooks and impedes. This is related to the built structure as the classroom is a direct relationship to the woods, a child is as curious in nature as he or she is in a Montessori classroom.



Elementary 1 Classroom



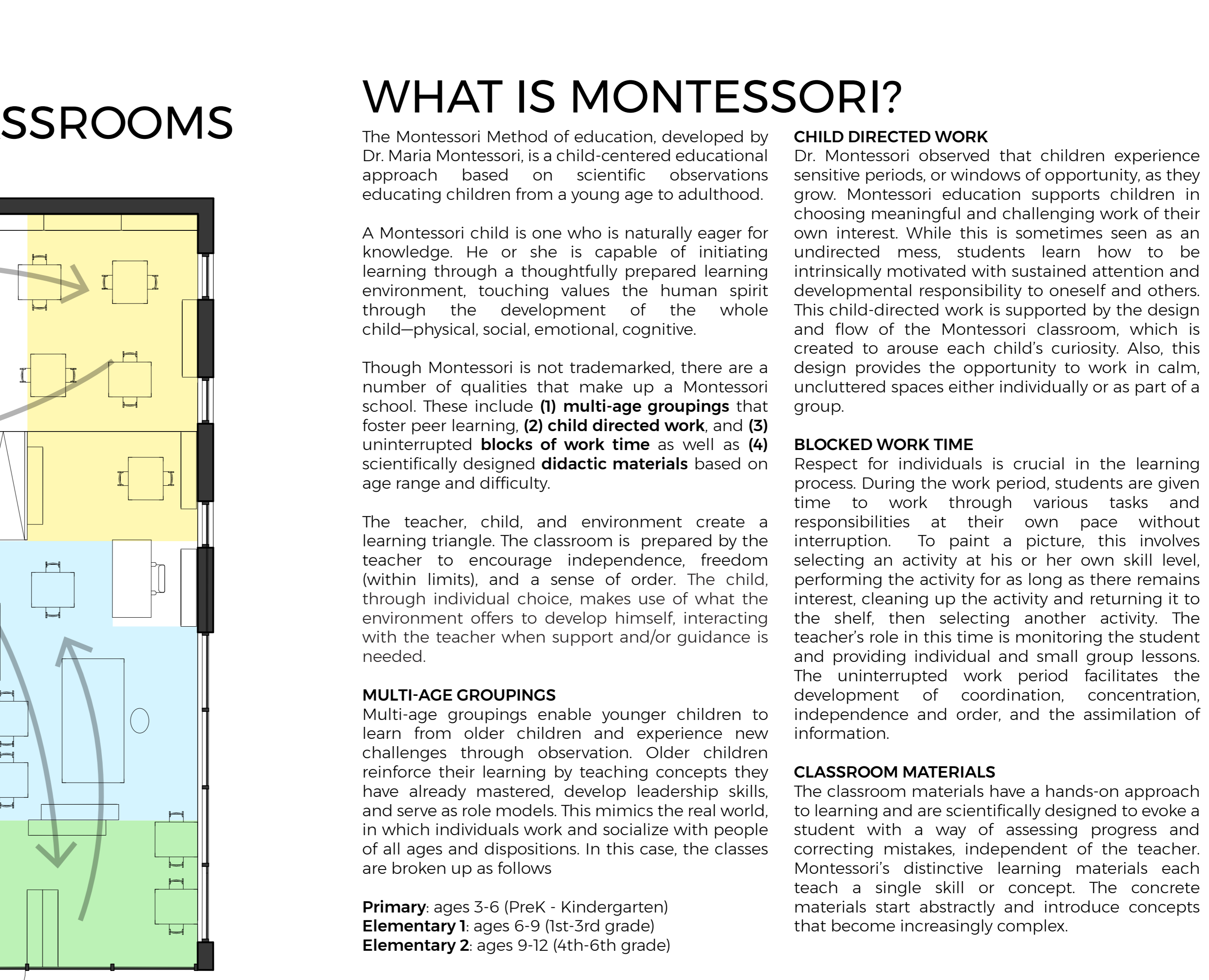
Building Entrance



Entry / Start
Time of day: 9:00am
As a seed begins small and submerged underground, so does a young child as he/she begins school. At the school, an immediate step underground to the main floor is necessary for the learning process. This teaches the children to be humble and giving.



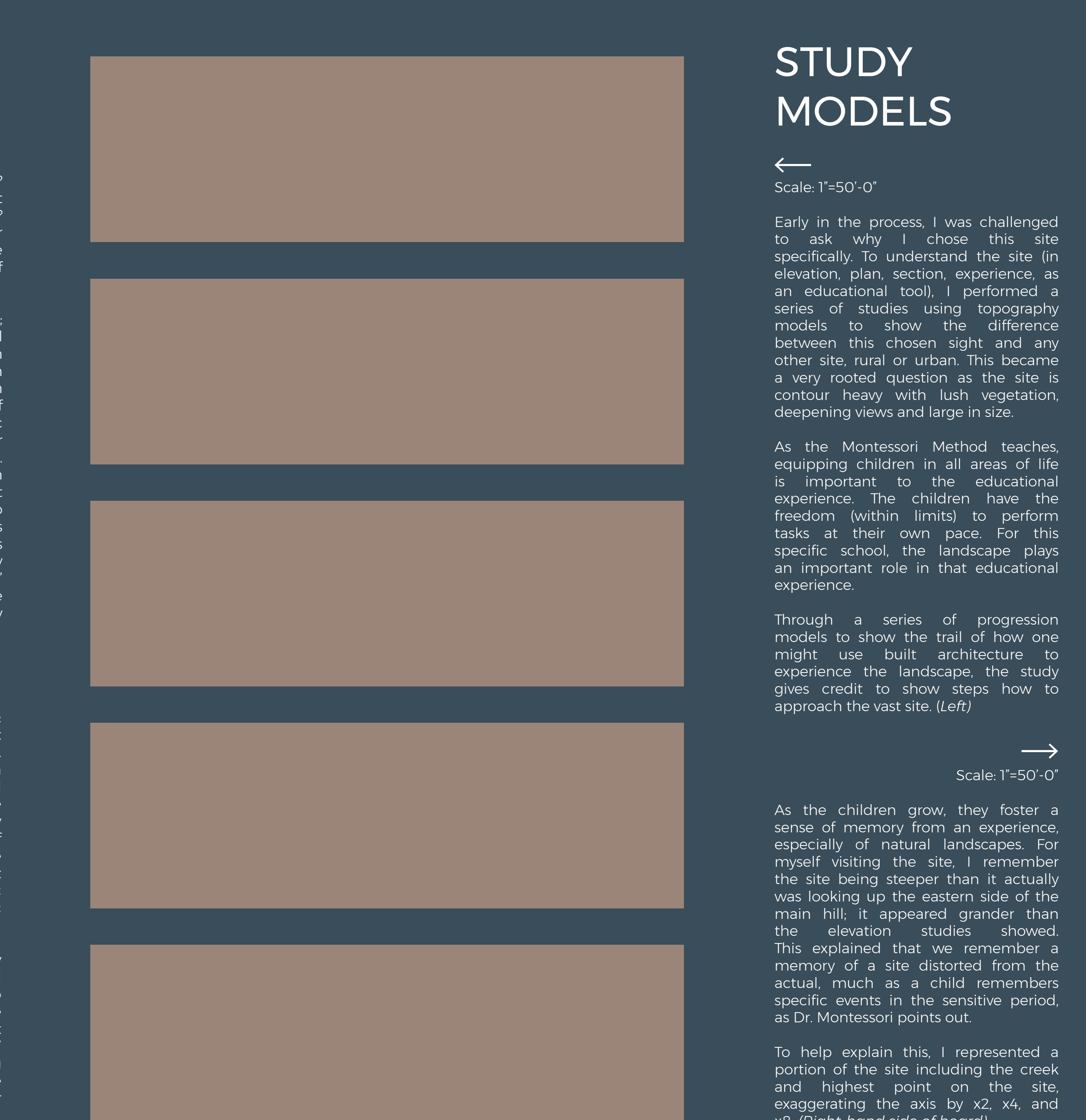
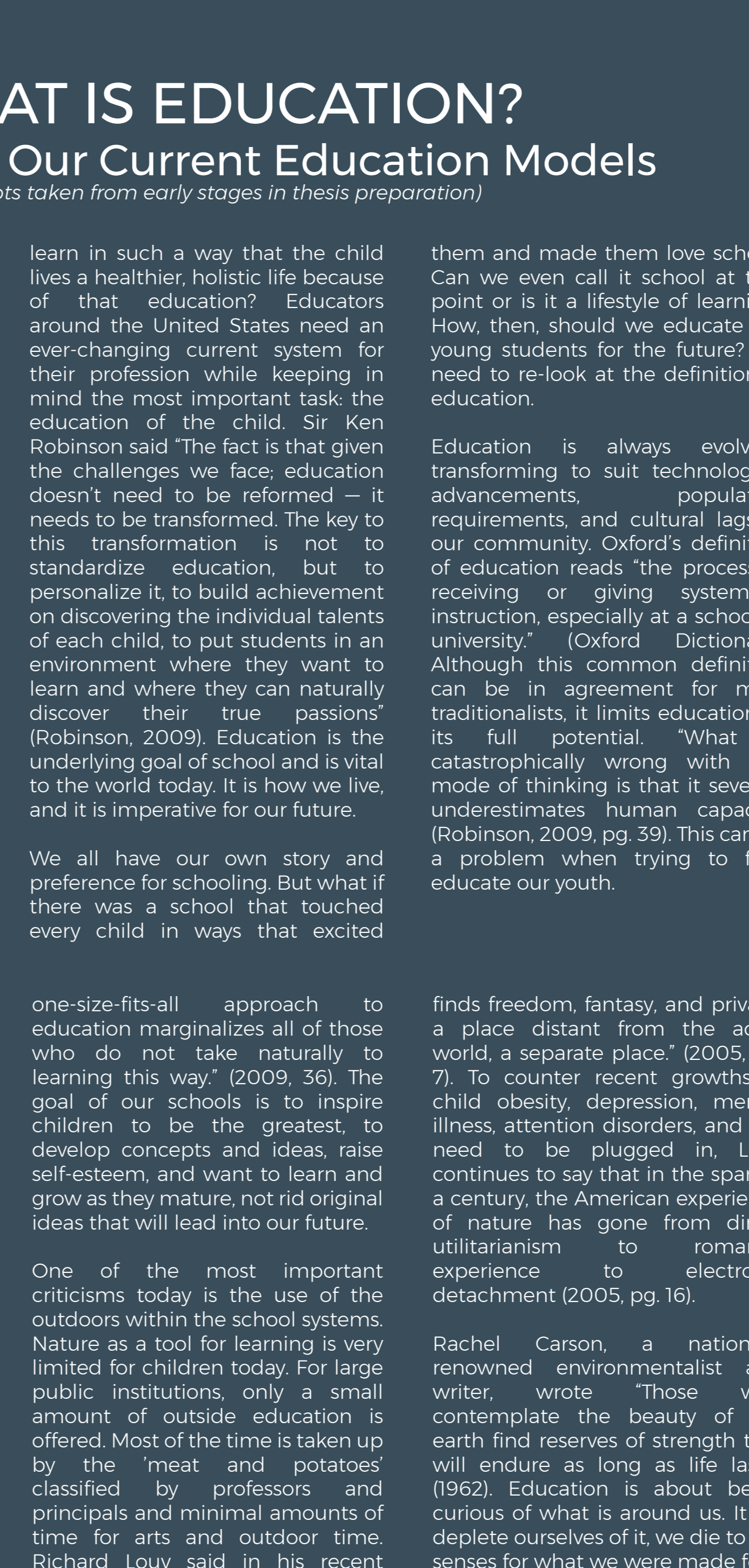
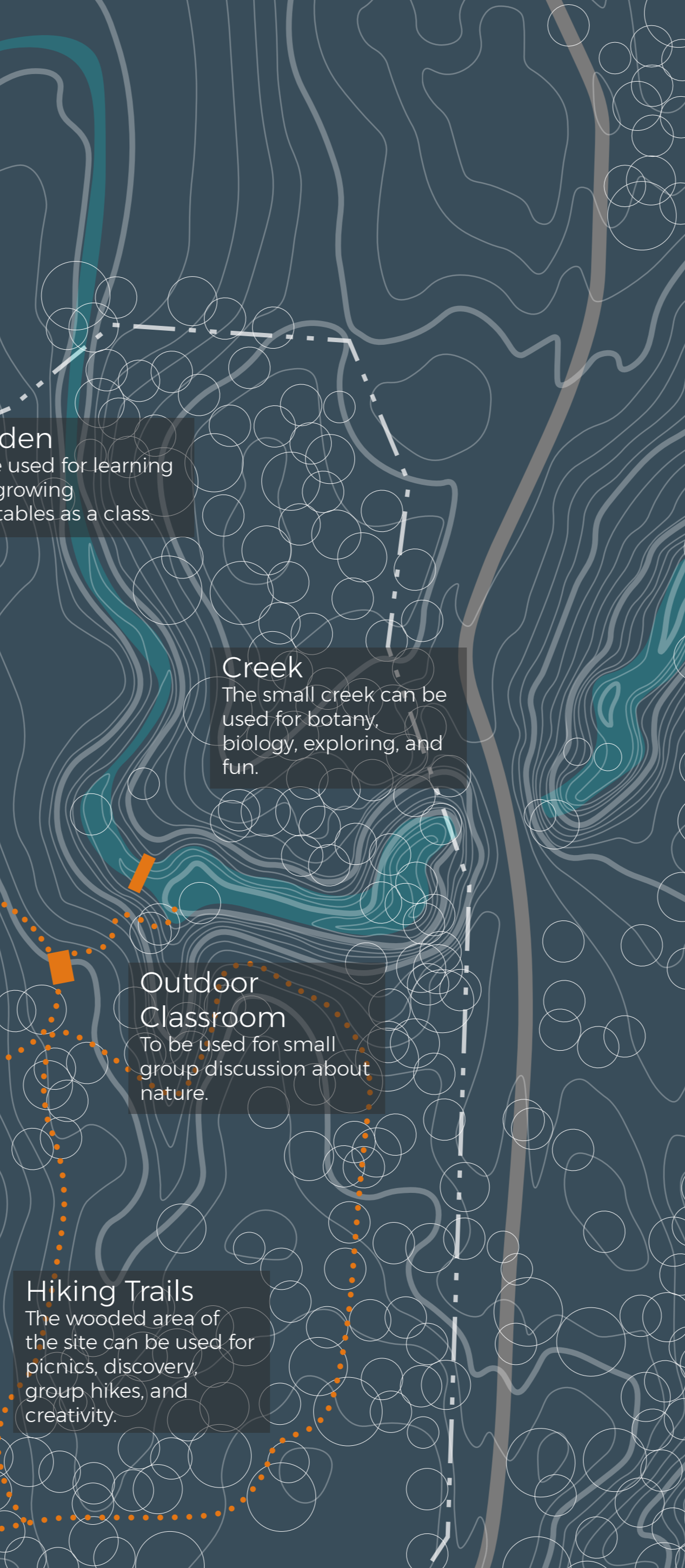
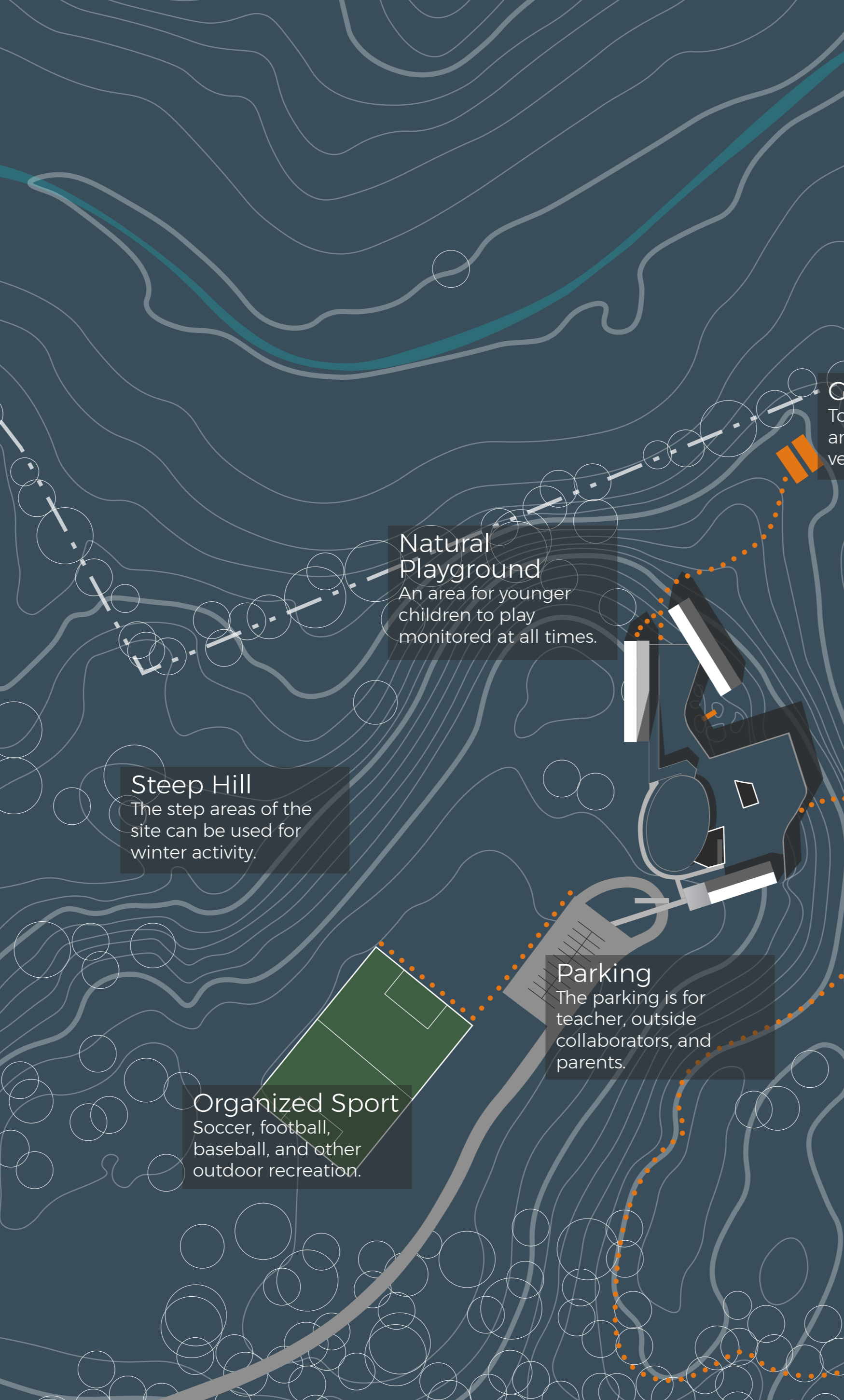
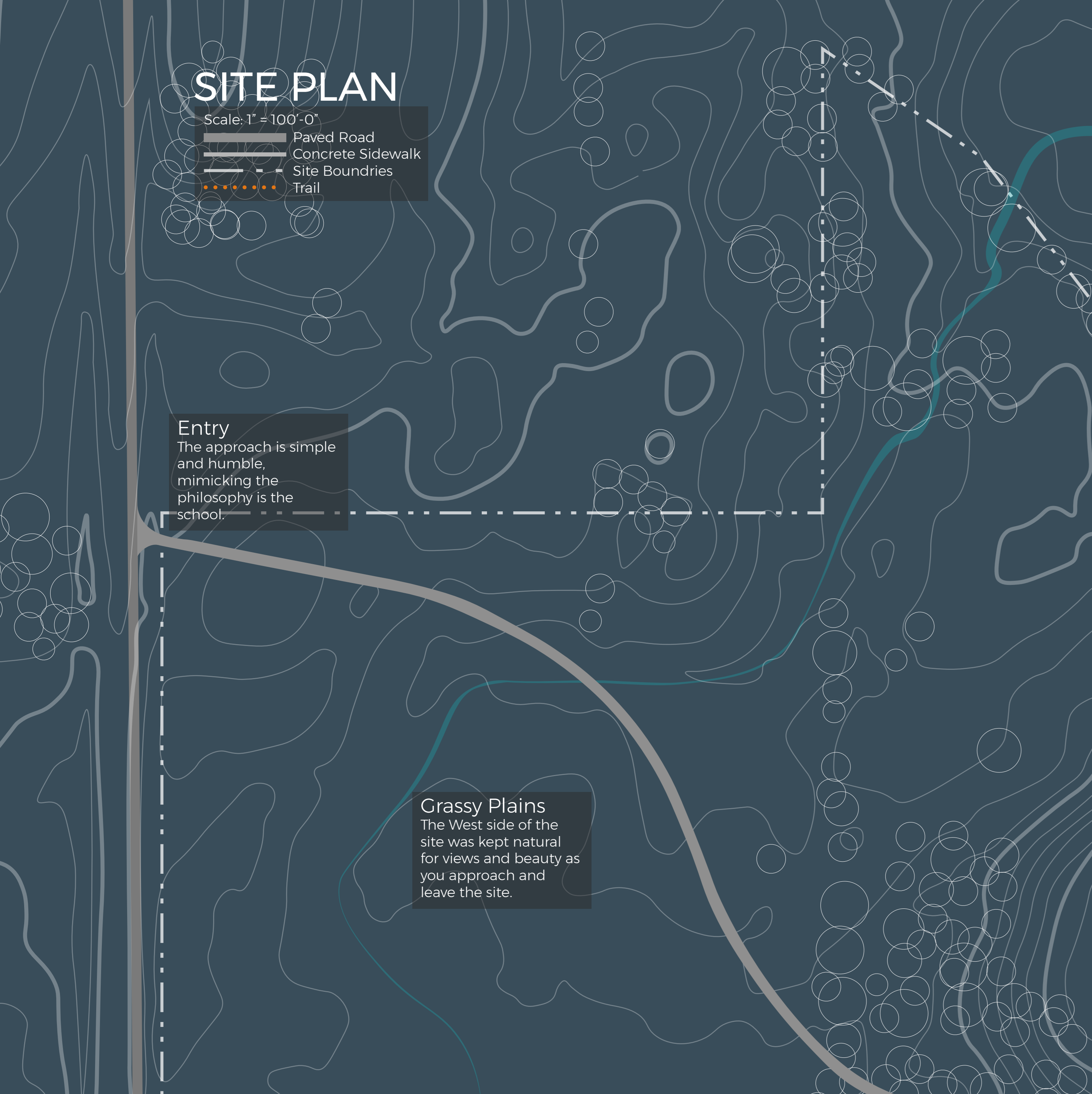
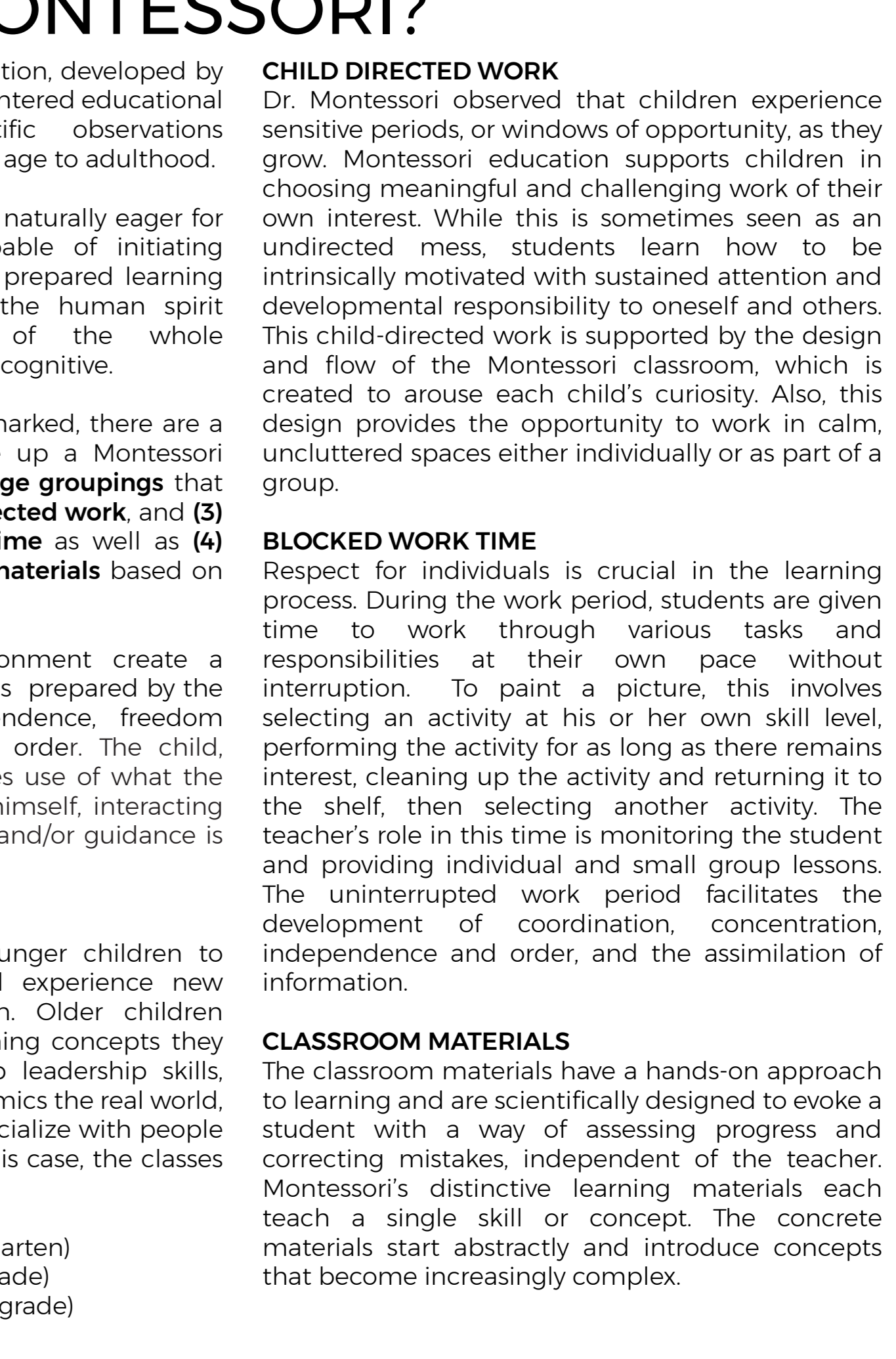
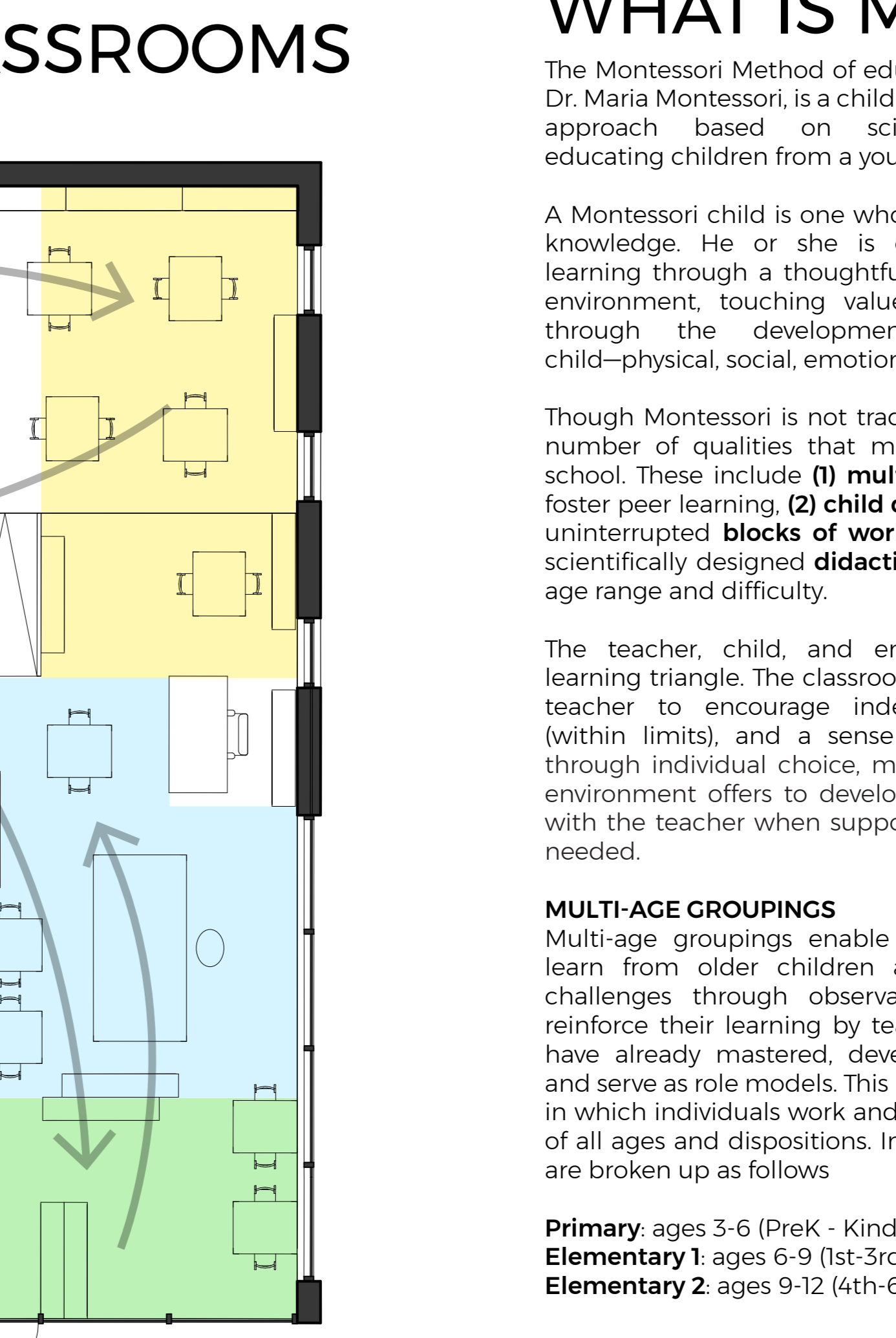
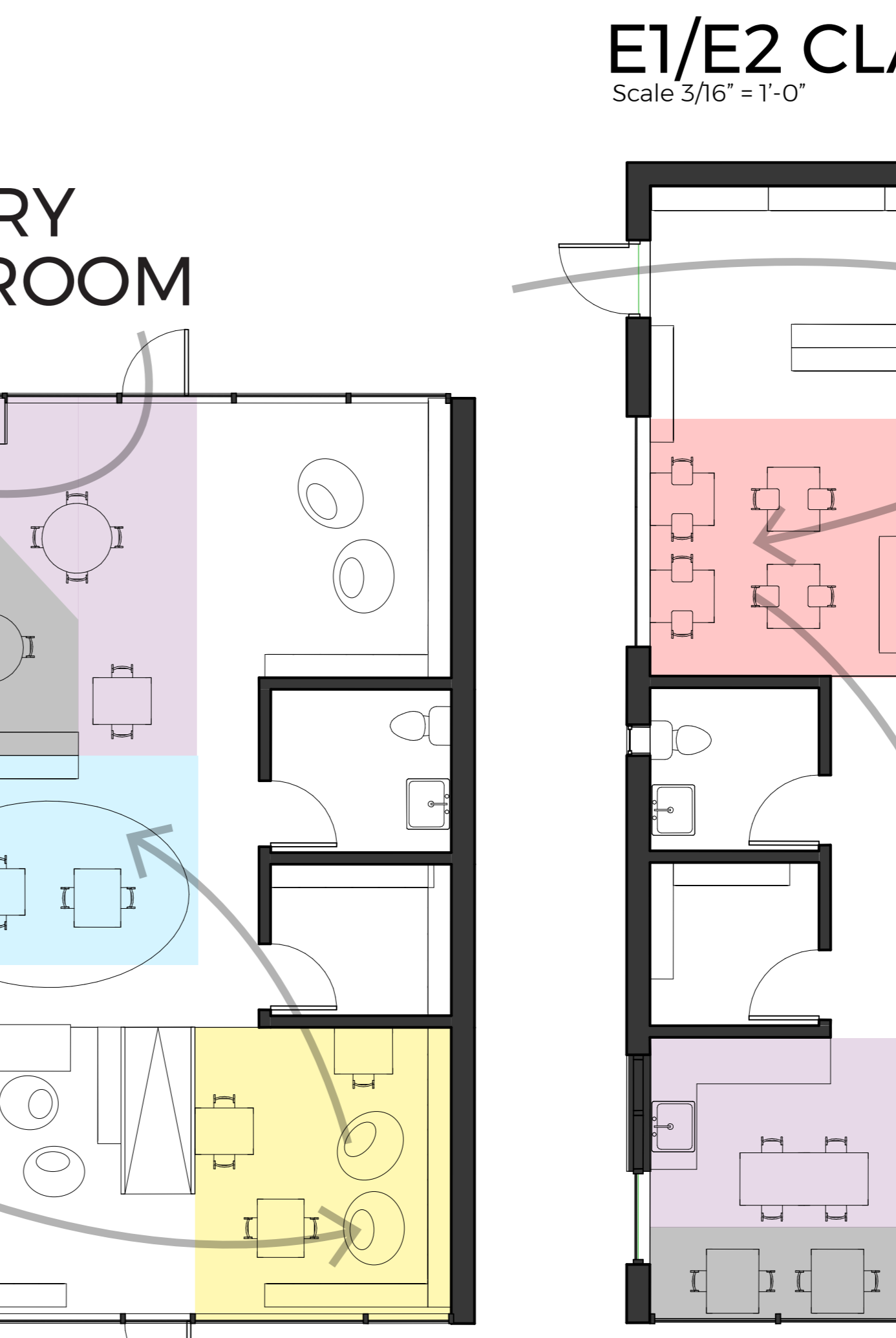
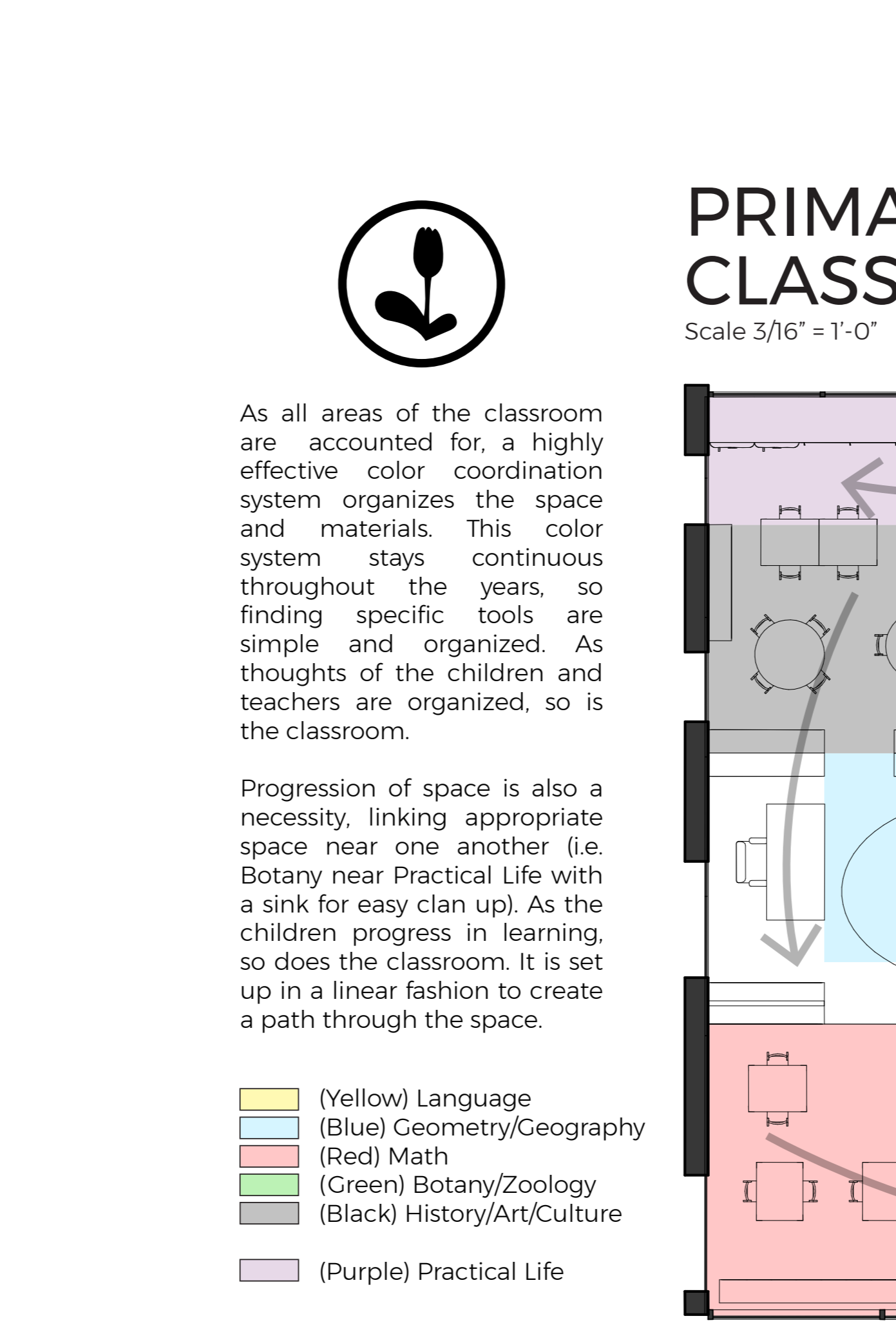
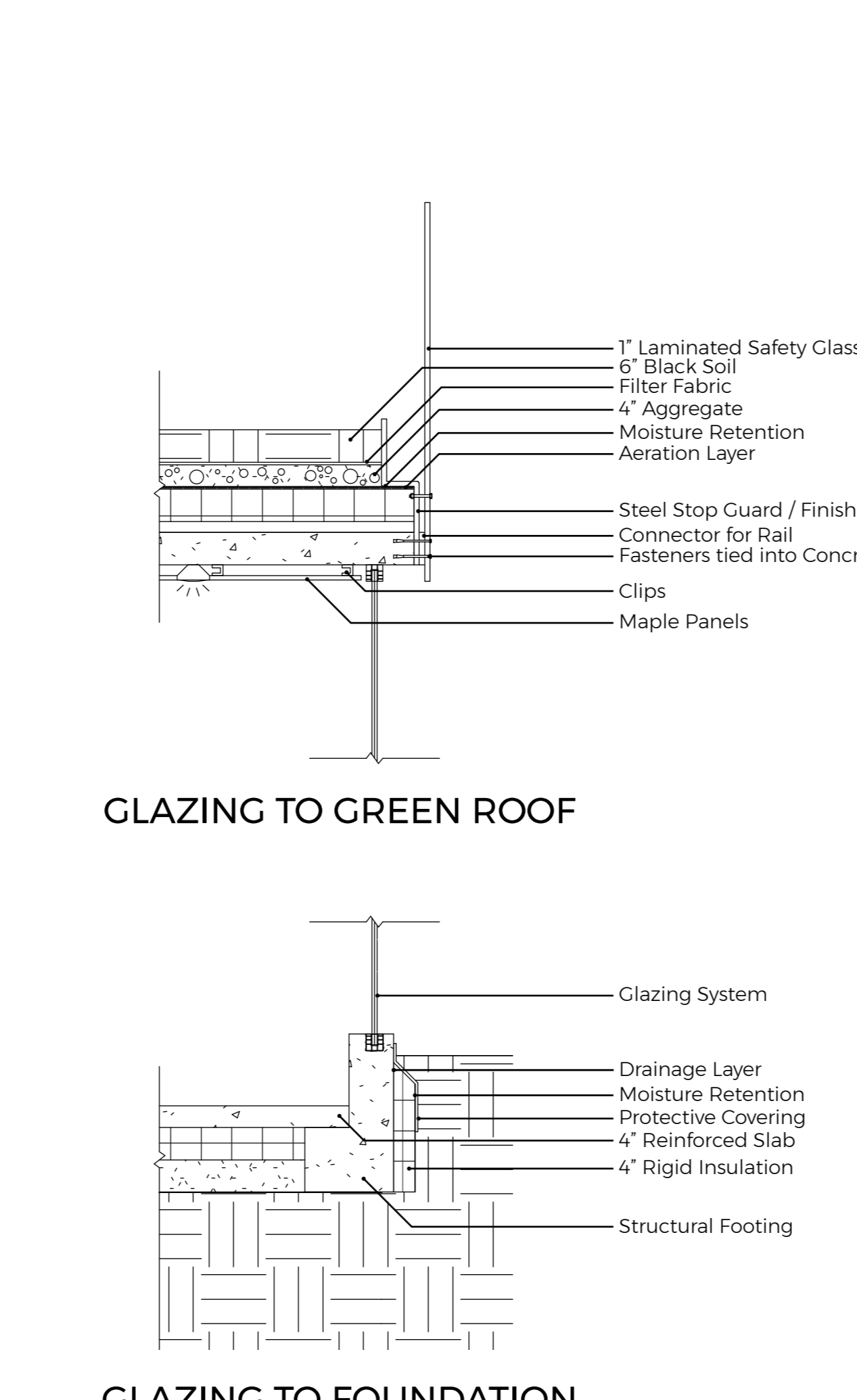
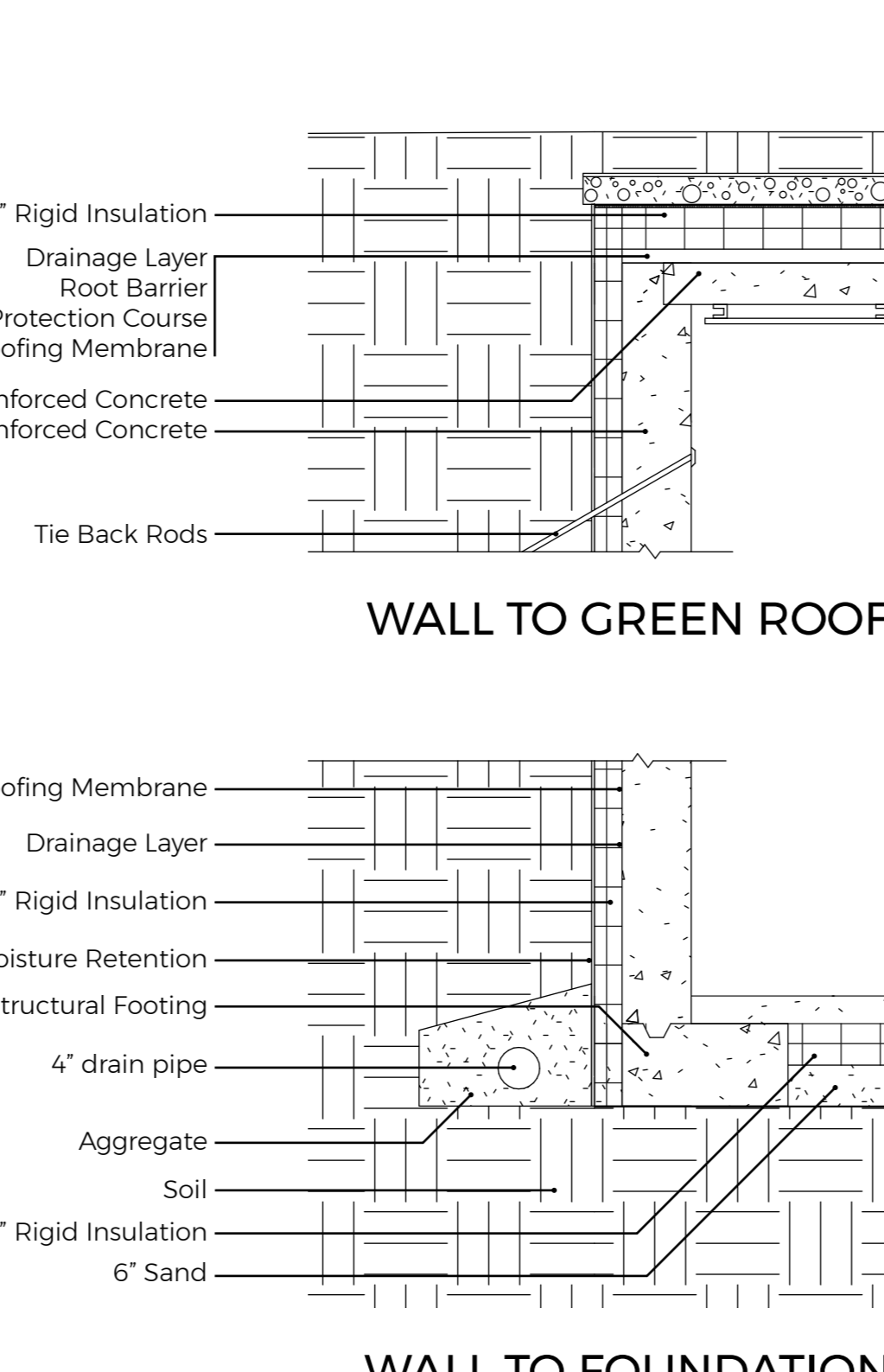
Transition from Commons to Classroom



Transition / Learn / Imagine
Time of day: 9:00am
Because of the program, all areas of the school may be used for learning, including indoors and outdoors. Specific zones for monitored outdoor play are shown in the natural playground. Small monitored group areas may include access to the river for a biology lesson, gardening, sledding, hiking, organized sports, and others.

MAIN DETAILS

The relationship of building to landscape is important to the success of the design. The four relationships below sum up a majority of the foundations, walls, and green roofs.



WHAT IS EDUCATION? A Look into Our Current Education Models

(concepts taken from early stages in thesis progression)

There are a number of different learning styles in the world today. Some involve work with others, others self-motivation and support. Thus many children are left with an unengaged education. The region where a child lives, also, has a significant role on how education is meaningful and productive. It is up to the challenges we face, education doesn't need to be reformed — it needs to be transformed. The key to this transformation is not to standardize education, but to personalize it to build achievement on discovering the individual talents of each child to put students in an environment, where they want to learn and where they can naturally discover their true passions' (Robinson 2006). Education is the underlying goal of school and is vital to the world today. It is how we live, and it is imperative for our future.

We all have our own story and preference for schooling, but what if there was a school that touched every child in ways that excited them and made them love school? Can we even call it school at that point or is it a lifestyle of learning? How, then, should we educate our young students for the future? We need to re-look at the definition of education.

Education is always evolving, transforming to suit technological advancements, population requirements, and cultural shifts in our community. Outside's definition of education, ready the process of receiving or learning of systematic instruction, especially at a school or university. (Oxford Dictionary)

Although this common definition can be in agreement for most traditionalists, it limits education to its full potential. 'What is catastrophically wrong with this mode of thinking is that it severely underestimates human capacity' (Robinson 2006, pg. 30). This can be a problem when trying to fully educate our youth.

One-size-fits-all approach to education marginalizes all of those who do not take naturally to learning this way' (DODS, 36). The goal of our schools is to inspire children to be the greatest, to develop concepts and ideas, raise self-esteem, and want to learn and grow as they mature, not to drill original ideas that lead into future learning into students' heads. This process is a safe default, but in fact, learning is far more powerful when contextualized to each student's individual life experiences' (Loudon Rivers, 2006, pg. 8). All the standardized testing is making children feel disconnected from the culture of education. Education is the system that is supposed to develop our best and natural abilities (DODS). We need to ask questions such as how can we inspire our children to want to learn curiously and naturally? and how can we help them reach their fullness of potential? Robinson says that 'The

STUDY MODELS

Early in the process, I was challenged to ask, why I chose this specifically to understand the site (in essence, the section experience, an educational tool, I performed a series of studies using topography models to show the difference between this chosen site and any other site, rural or urban. This became a very rooted question as the site is continuous with each other, deepening views and large in size.

As the Montessori Method teaches, exploring children in all areas of life is important to the educational process. The child must have freedom (within limits) to perform tasks at their own pace. For this site, being deeper than it actually is, an important role in that educational experience.

Through a series of progression models to show the trail of how one might use such an outdoor space to experience the landscape, the study gives credit to show depth, how to approach the vast site. (Left)

Scale: 1/50' = 1'-0"

As the children grow, they foster a sense of memory from an experience, especially of natural responses for myself visiting the site. I remember the site being deeper than it actually was, looking up the eastern side of the main hill, it appeared grander than the elevation studies showed. This explained that I remember a memory of a site situated from the actual, much as a child remembers specific events in the sensitive period, as Dr. Montessori points out.

To help explain this, I represented a portion of the site including the creek and highest point on the site, expanding the view by 42, 48, and 54 (right hand side of board).

Scale: 1/50' = 1'-0"

Rachel Carson, a nationally renowned environmentalist and writer, wrote 'Those who contemplate the beauty of the earth find reserves of strength that will endure as long as life lasts' (1952). Education is about being curious of what is around us, to we desire ourselves of it, we desire our senses for what we were made for.