



NATIONAL COVID-19
OUTDOOR LEARNING
INITIATIVE

CREATING
OUTDOOR SPACES

EMERGENCY
SCHOOLYARD
DESIGN VOLUNTEERS



MONTESSORI SCHOOL — NORTHERN DELAWARE

This Montessori school is located in a suburb in Northern Delaware. The school has a 25 acre campus, including a large wooded area, and staff have always been committed to developing outdoor learning opportunities. Located in a suburban environment with approximately 130 students, the school's goal was to develop ten outdoor classrooms and ten smaller breakout rooms, as well as mitigate some water issues on site.

Site Analysis Considerations

Montessori School Delaware

School Characteristics

Students

- 130 total enrolled students
- Primary (3-6 years): 4 classes, 10-12 students
- 2nd Grade (6-9 years): 2 classes of 14 students
- 5th Grade (9-12 years): 1 class of 16 students
- Middle School: 1 class of 7 students
- 10 outdoor classrooms needed
- 10+ small breakout areas needed

School Grounds

- Suburban location, 25 acres.
- Partially paved, partially lawn.
- Multiple play areas with play structures.
- 3 main entrances with outdoor access from many individual classrooms.
- Large wooded area with creek and stage.
- Disruptive noises include the airplane path above and adjacent train tracks with I-95 just beyond.

Climate

- Climate Zone 7a
- Rain, wind, snow





Montessori School, Delaware Site Photographs



Photographs, first column to second column

1. Soccer Field and Surrounding Area
2. Green Space Near Toddler Playground
3. Peace Park
4. 4th-8th Grade Outdoor Classrooms
5. Courtyard
6. Enclosed Primary Play Space
7. 1st-3rd Grade Outdoor Classrooms
8. Archery Field and Drainage Area

Photos: Amy Matusheski

NOTE: These diagrams are intended to provide visual concepts to assist schools in planning. They are neither intended nor may be used for construction. Neither Green Schoolyards America nor the design volunteers assume responsibility or liability for the technical accuracy of drawings or for any unauthorized use.

Montessori School Delaware

Scenario #1: Low Cost



● (7) 22' dia. circle seating areas for 8-10 students (lower school)

▲ (12) 10' x 10' breakout rooms for 4-5 students

● (7) 22' dia. circle seating areas for 8-10 students (upper school)

■ Active gardening area

↕ Entry from street
 ↕ Entry from building
 ↕ Entry from classroom

Climate Considerations

- Local climate varies seasonally
- Classes will require protection from sun, rain, and snow and appropriate clothing to keep everyone warm and dry

Climate Adaptation Strategies

- Use outdoor classrooms as "Plan A" when the weather is nice; go inside or online when it is raining or too cold
- Strategically placed seating areas taking into account distractions and possible weather conditions

Use and Augment Existing Infrastructure

- Low cost seating areas utilize natural shade and protection as opposed to installing a permanent feature.
- Adds a small student gardening area
- Preserve space for gardening and nature play

Scenario #1: Outdoor Capacity

- Max: 120 students in 12 seating areas
- Max: 6 students in active garden areas
- Capacity: 92% of enrolled students













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Montessori School Delaware

Scenario #2: Moderate Cost



	(4) Natural screen or divider (straw bales, willow, potted plants or other) or whiteboard dividers		(5) 20' x 20' shade canopy for 8 students		(12) 10' x 10' breakout rooms for 4-5 students
	(7) 22' dia. circle seating areas for 8-10 students (lower school)		Active gardening area		Amphitheater seating
	(3) Storage cart or box		Sloped courtyard garden		(7) 22' dia. circle seating areas for 8-10 students (upper school)
	Wooden pallet decking				

Climate Considerations

Build on Scenario #1

- Install shelters to protect from rain, snow, and sun. Ideal shelters could be adjustable in height to allow winter sun
- Covers the spaces with the greatest exposure to the elements

Climate Adaptation Strategies

- Adding shade structures to spots that do not have any natural shade increases the usage of the space

Use and Augment Existing Infrastructure

- Add low cost seating (mats, stumps, benches, and/or existing desks/tables)
- Install shelters to protect from rain, snow, and sun in areas
- Add storage larger, shared storage sheds
- Preserve and activate space for gardening and nature play
- Add physical dividers to separate the spaces that are within close proximity

Scenario #2: Outdoor Capacity

- Max: 130 students in 13 covered seating areas
- Max: 16 students in active garden areas
- Capacity: 100% of enrolled students



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Montessori School Delaware

Scenario #3: Green Infrastructure Investment

Climate Considerations












Build on Scenario #2

- Add shade structures to all outdoor spaces
- Includes natural barriers, and white board style barriers to separate classrooms
- Including storage boxes for each classroom for teachers and students to easily access supplies

Climate Adaptation Strategies

- We chose to add a rain garden to direct the water away from the field
- Including shade structures and other amenities help benefit the teachers such as storage areas and whiteboards
- As we work to include more shade structures and experiential gardens, these sites transform into more permanent spaces



 (12) Natural screen or divider (straw bales, willow, potted plants or other) or whiteboard dividers	 (12) 20' x 20' shade canopy for 8 students	 (4) 10' x 10' breakout rooms for 4-5 students
 Rain garden	 Active gardening area	 Amphitheater seating
 (11) Storage cart or box	 Sloped courtyard garden	 (7) 22' dia. circle seating areas for 8-10 students (upper school)
 Wooden pallet decking	 (7) 22' dia. circle seating areas for 8-10 students (lower school)	

Scenario #3: Outdoor Capacity

- Max: 130 students in 13 covered seating areas
- Max: 16 students in active garden areas
- Capacity: 100% of enrolled students

