

JUN | 03 | 2021

# Del Mar Hills Academy

Community Meeting

## DESIGN FUNDAMENTALS

In the development of the prototypes, it became apparent that the District's vision for their educational programming and physical environments is in line with the fundamentals of great architectural design. These architectural fundamentals apply to all habitable environments. However, in educational design they have been studied extensively and have proven to significantly benefit the educational and emotional development of children. As such, design for Del Mar's Modern Learning Spaces must be holistic in its approach, and include access to light, air, the exterior environment, varied learning zones, and varied / flexible work spaces.

Numerous studies have been performed of environmental impacts on student performance and healthy schools. While many studies are observational and anecdotal, all studies return with similar conclusions. Connection to the outdoors and students' ownership of their classroom environment have been noted to play an important role in their development. Natural daylight; controlled ventilation, both natural and mechanical; views to the outdoors; flexible classroom set up; and varied / comfort focused furnishings all play a POSITIVE role on students' learning and progress.

It is easy to lose sight of even the simplest measures that can bring greater quality to our everyday working and learning environments, not realizing how great our experience can be until it is changed and we are transformed. These elements are not "nice-to-haves" but are "must-haves" for future learning facilities. Implementing these student-focused measures will have a positive effect on students' academic performance as well as their health, well-being, and excitement for learning. Integrating fundamental elements of design is essential to any built environment and is imperative for students of the future.



### Outdoor Connection / Views

"An ample and pleasant view out of a window, that includes vegetation or human activity and objects in the far distance, support better outcomes of student learning."

- California Energy Commission, Windows and Classrooms: A Study of Student Performance and the Indoor Environment, October 2003



### Varied Style Furnishings

"Furniture and features in the class that were ergonomic and comfortable for the children were significantly correlated to learning progress."

- Science Direct, Impact of Classroom design on pupils' learning: Final results of a holistic, multi-level analysis, 2015



### Varied Learning Zones / Flexibility

"Flexibility measures like breakout spaces and rooms, storage solutions, number of different learning zones and potential display area were correlated with learning progress."

- Science Direct, Impact of Classroom design on pupils' learning: Final results of a holistic, multi-level analysis, 2015



### Ventilation

"Mental attention of pupils are significantly slower when the level of CO<sub>2</sub> in classrooms is high and when the air exchange rate is low...students perform better in the room that has mechanical ventilation, large volume or large window openings."

- Science Direct, Impact of Classroom design on pupils' learning: Final results of a holistic, multi-level analysis, 2015



### Daylight

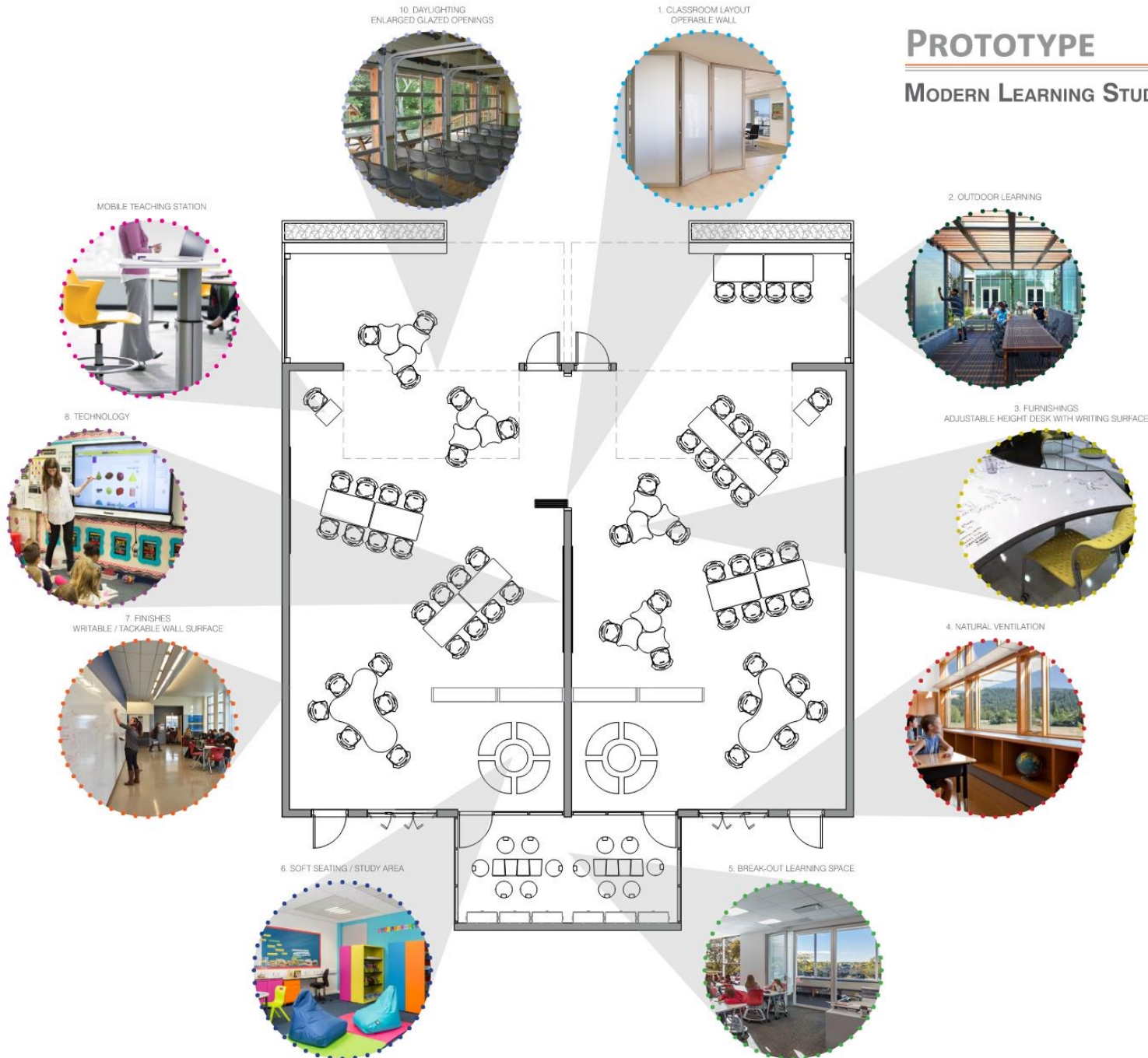
"Regarding academic impacts, one well-known study showed that students in daylight classrooms had greater improvement over the course of one school year in math and reading standardized test than students in windowless classrooms" (Heschong Mahone Group, 1999).

- McGraw-Hill Research Foundation / The Center for Green Schools: The Impact of School Buildings on Student Health and Performance, February 2012

# PROTOTYPE

## MODERN LEARNING STUDIO

In the development of the Facilities Master Plan Update, the District has researched and developed a prototype for the ideal classroom, the Modern Learning Studio. The classroom space is no longer a row of desks with an instructor at one side of the room. The classroom for today's learners makes way for collaborative learning with adjustable orientations; mobile, adjustable desks; and varied seating. It allows the student to lead the class in presentation or demonstration. The following components speak to the District's goals for each classroom on all campuses. The diagram shows options for the ideal learning studio.



### 1. CLASSROOM LAYOUT

- OPEN UP CLASSROOM WITH LESS PERMANENT STORAGE AND FLEXIBLE LEARNING ORIENTATIONS
- OPERABLE WALL TO CONNECT TO ADJACENT CLASSROOM FOR JOINT TEACHING

### 2. OUTDOOR LEARNING

- ENLARGED GLAZED OPENINGS FOR INDOOR/OUTDOOR CONNECTION
- COVERED BY TRELLIS / BUILDING OVERHANG
- BUILT IN CONCRETE SEAT WALL, ENHANCED PAVING

### 3. FURNISHINGS

- ADJUSTABLE HEIGHT DESK WITH WRITING SURFACE
- COLLABORATIVE / MOBILE ORIENTATION
- MOBILE STORAGE

### 4. NATURAL VENTILATION

- OPERABLE WINDOWS

### 5. BREAK-OUT LEARNING SPACE

- DEDICATED JOINT-USE SPACE FOR SMALL GROUP/ INDIVIDUAL TEACHING SESSIONS / MAKER SPACE

### 6. SOFT SEATING / STUDY AREA

### 7. FINISHES

- DURABLE FLOORING
- WRITABLE AND TACKABLE WALL SURFACES

### 8. TECHNOLOGY

- APPROPRIATE TECHNOLOGY TOOLS FOR A VARIETY OF LEARNING EXPERIENCES

### 9. MOBILE TEACHING STATION

### 10. DAYLIGHTING

- LED LIGHTING WITH DAYLIGHT SENSORS
- NATURAL DAYLIGHT THROUGH ENLARGED GLAZED OPENINGS

# PROTOTYPE

## INNOVATION CENTER



## PART 2.2

## COMPONENTS

As with the Modern Learning Studio, so too will Libraries transform into open, collaborative spaces for group and individual learning opportunities. The library no longer is a quiet space for reading and research alone. It is becoming an Innovation Center that will house that quiet space as well as group open space, multiple styles of seating, writing walls, art and science lab spaces, computer hubs, and maker spaces.

- 1. OPEN LAYOUT**
  - OPEN SPACE TO ADMINISTRATION OFFICES / SITE ENTRY AS HUB OF CAMPUS
  - MINIMIZE BOOK STACKS TO ESSENTIAL COLLECTION
  - FLEXIBLE / CHANGEABLE ORIENTATIONS / SEATING AREAS
- 2. TECHNOLOGY**
  - VARIETY OF TECHNOLOGY TOOLS FOR A VARIETY OF LEARNING PURPOSES
- 3. OPEN LEARNING SPACES**
  - MAKER SPACE
  - ART / TECH / SCIENCE ZONES
  - ENLARGED GLAZED OPENINGS
  - LEARNING GROUPS SPILL OUT INTO OPEN SPACE
- 4. VARIED SEATING AREAS**
  - SOFT SEATING
  - GROUP TABLE LEARNING
  - READING AREAS
- 5. INDOOR / OUTDOOR CONNECTION**
  - ENLARGED OPENINGS
  - NATURAL DAYLIGHT
  - NATURAL VENTILATION
  - COVERED OUTDOOR BREAKOUT LEARNING SPACES
- 6. DAYLIGHTING**
  - LED LIGHTING WITH DAYLIGHT SENSORS
  - SKYLIGHTS
  - NATURAL DAYLIGHTING THROUGH ENLARGED GLAZED OPENINGS
- 7. IDEA BOX**
  - DEDICATED SPACE FOR QUIET READING, GROUP COLLABORATION
  - WRITABLE WALL SURFACES
  - STUDENT DRIVEN USE OF SPACE
- 8. FLOORING**
  - DURABLE FLOORING IN OPEN SPACES
  - SEALED CONCRETE IN MAKER / ART / SCIENCE ZONES
- 9. WRITABLE WALL SURFACES**
  - COLLABORATIVE BRAINSTORMING AND DESIGN

# DEL MAR HILLS

## EXISTING SITE ASSESSMENT



Del Mar Hills Academy was constructed in 1975 and is the second oldest site in the District. It is a single story school with a hexagonal building form, similar to Del Mar Heights, with multiple relocatable classrooms and a separate Multi Use Room (MUR) constructed after the original buildings. The primary material of the original building is exposed aggregate concrete panels with overhangs and equipment screens clad with painted wood framing. Roofs are flat, built up with gravel ballast. The site is nestled amongst multiple trees and a rolling green space.

Classrooms are approximately 900-950 square feet with an underutilized, internally accessible shared work space. The rooms are all triangular as dictated by the building geometry, which has limited classroom flexibility, daylighting opportunities, and wall space. Some walls have been removed within the classrooms closest to the library in an attempt to make the spaces more flexible and collaborative.

In order to improve learning spaces, it is proposed that permanent partitions be removed where possible, and replaced with moveable partition walls. It is also proposed to provide direct classroom connection to the exterior with an enlarged glazed entrances where possible, presenting opportunity for exterior classroom space.

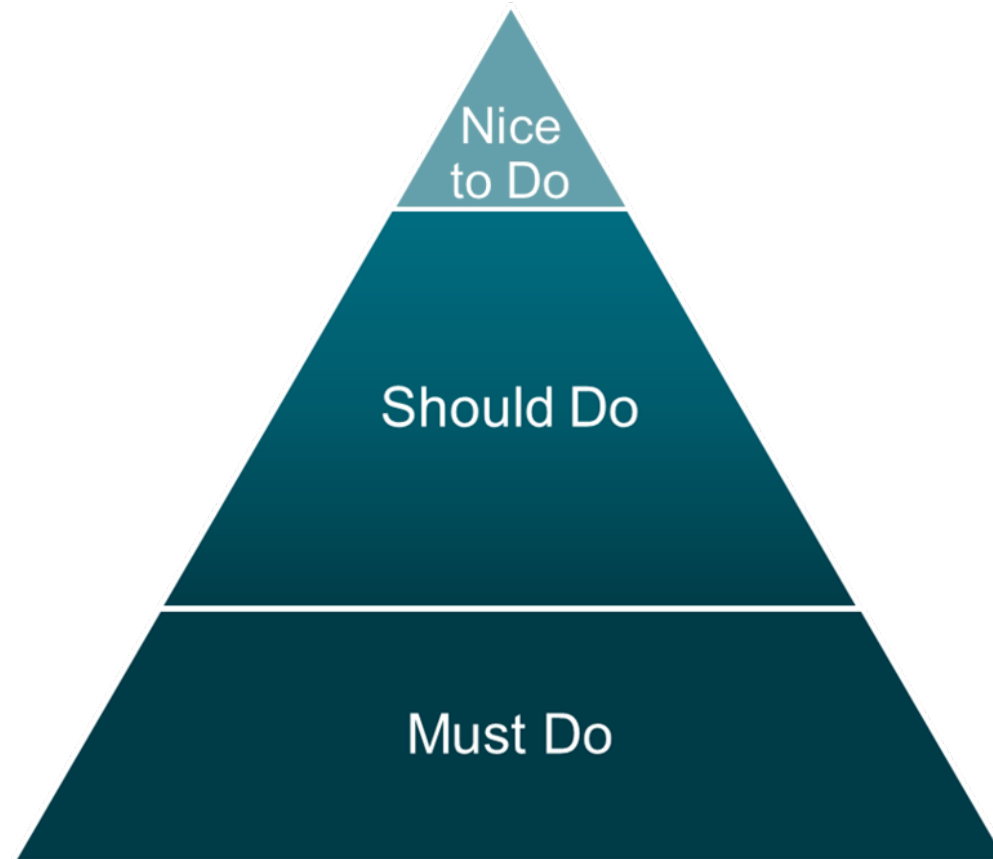
The point of entry is through the Administration space which is located against the campus' driveway with little room for expansion. Currently visitors can freely walk through the administration area further into learning spaces. It is proposed to reconfigure the interior Administration space to improve site security and access to the campus. The Library is centrally located with direct connection to an exterior seating area, classrooms and Administration. It is proposed to further open this space to adjacent areas, as well as to the exterior, instituting the District's Innovation Center Prototype.

The Multi Use Room (MUR) is a separate building and of newer construction. The restrooms are required to be expanded and upgraded for current accessibility requirements and relocated due to acoustic concerns.

The site's building systems and underground utilities also require extensive repair or complete replacement. The plumbing throughout the campus requires replacement; roofing and associated HVAC mechanical units require replacement; all wood trellis and equipment screens require replacement.

There are currently (5) portable classroom buildings at the west side of the site, as well as (1) housing the District Technology Department at the east side. The (5) classrooms will be removed and replaced with site improvements. The District Technology Department portable will also be removed once the Department has been rehoused at another district site.







<https://www.surveymonkey.com/r/FN9ST92>



## 5. EXTERIOR INNOVATION CENTER

The Innovation Center is proposed to spill out and directly connect to the adjacent courtyard and open exterior space. Large glazed openings are proposed to create that indoor / outdoor connection and to encourage varied uses of the space, whether it be for learning and making activities or school events. Outdoor areas adjacent to the Innovation Center are proposed to be renovated with built-in features such as seat walls, shade cover, landscaping, and enhanced paving to provide the opportunity for outdoor instruction and learning.



## 7. FRONT OFFICE IMPROVEMENTS

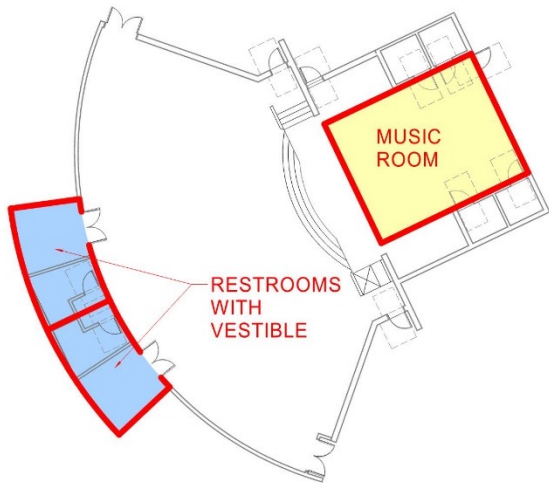
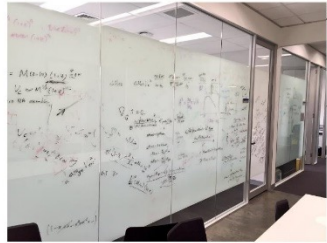
Front Office Improvements scope, in most cases, is specific to the lobby of the school. This scope of work includes minor reconfiguration to the lobby to provide visitors with a well defined waiting area and to provide staff with an unobstructed view to the main entry including creation of a soft security barrier. Student-scaled design shall be a consideration. In specific cases, the administration space requires full reconfiguration including, but not limited to, wall placement, lighting, finishes, building systems and office needs.



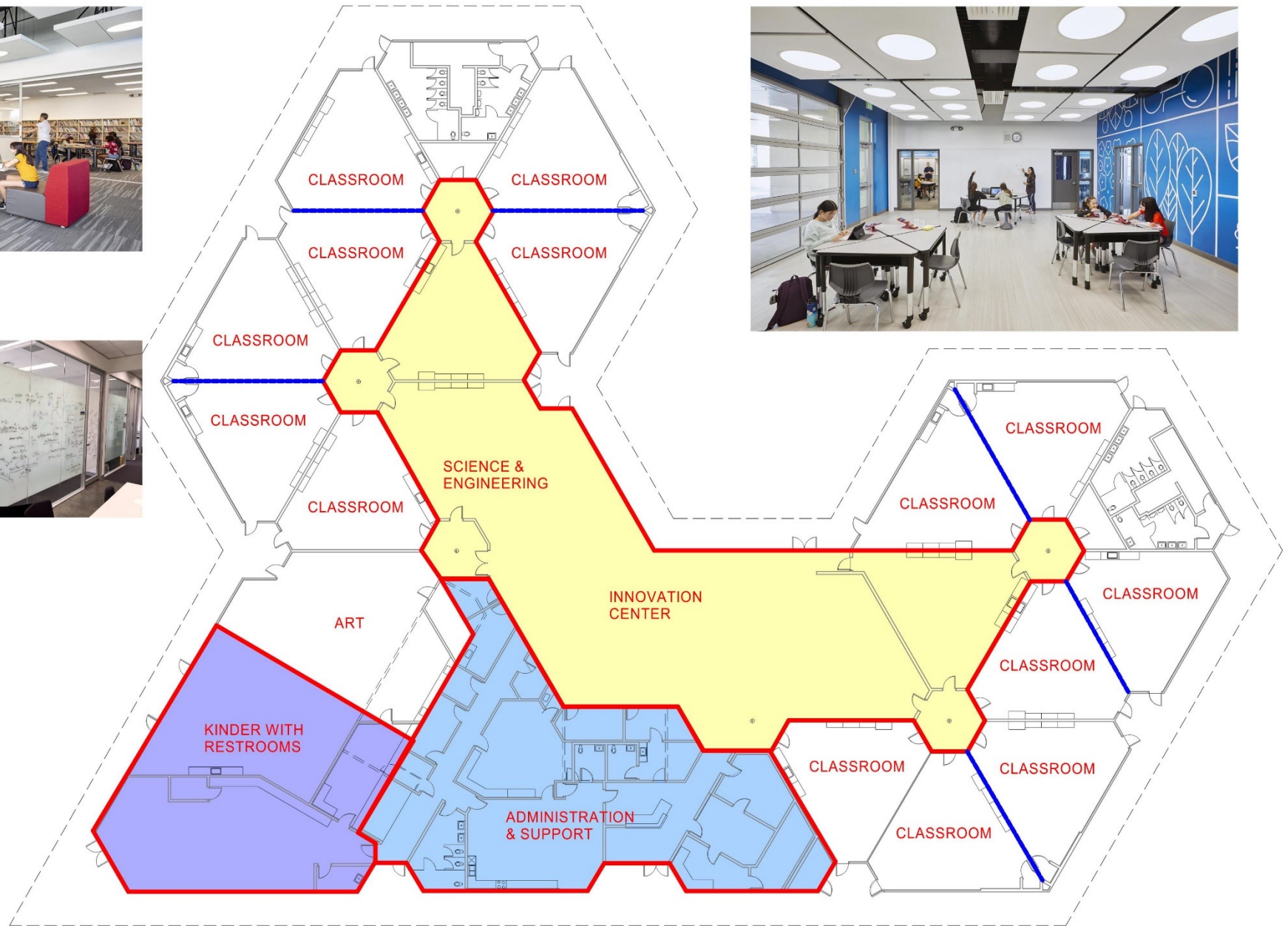
## 12. PLAY IMPROVEMENTS

Play Improvements scope includes replacement of ball walls and playfield upgrades. Scope also includes play structure ground resurfacing, new shade structures, and new play structures that are geared toward today's learners, with potential for kinetic, electronic, and cognitive play.





PERFORMING ART CENTER



MAIN BUILDING

# NEXT STEPS...

- Meeting 2                      September 2021
- Meeting 3                      October 2021
- Board Presentation      October 27, 2021

LIONÄKIS

relationships  
performance  
design