

green schoolyards america

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greenschoolyards.org

Mission

Green Schoolyards America collaborates with school districts to transform asphalt-covered school grounds into park-like green spaces that improve children's well-being, learning, and play while contributing to the ecological health and resilience of their cities.



Vision

We envision a future in which:



CHILDREN

...all children have daily access to nature right outside their classroom door, enabling dynamic hands-on learning across the curriculum, child-directed play, robust health, and a positive social environment.

ENVIRONMENT

...school grounds act as green infrastructure for their cities, helping to foster healthy urban watersheds, rich wildlife habitats, improved climate, and better air quality.

COMMUNITY

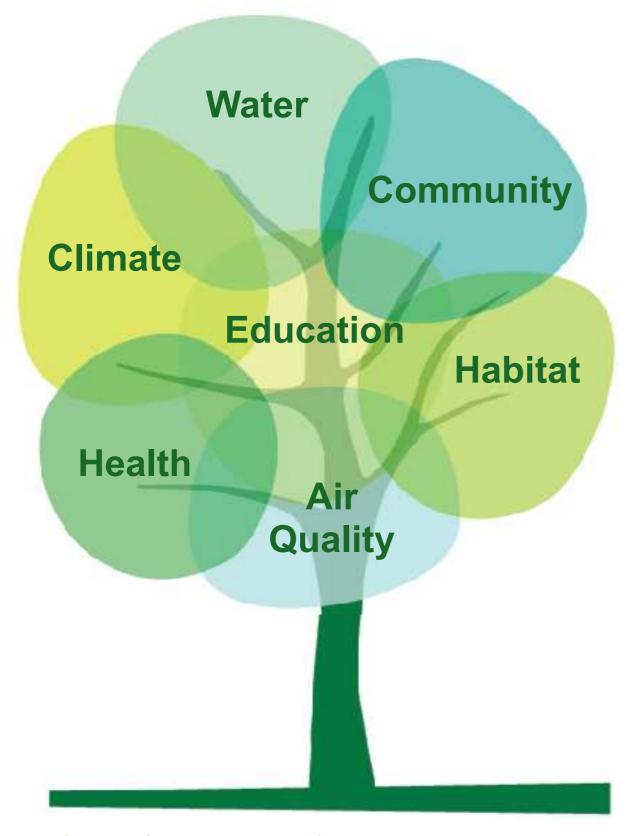
...school grounds are vibrant, welcoming centers for their communities, and the public lands managed by schools also function as public parks after hours. Access to this green space on school grounds is equitably distributed and within a short walk of every resident.



School grounds are an underused asset with enormous potential to help solve immediate and longterm problems.

They need systematic investment to become thriving centers for 21st Century education, public health, community engagement, and ecological resilience.





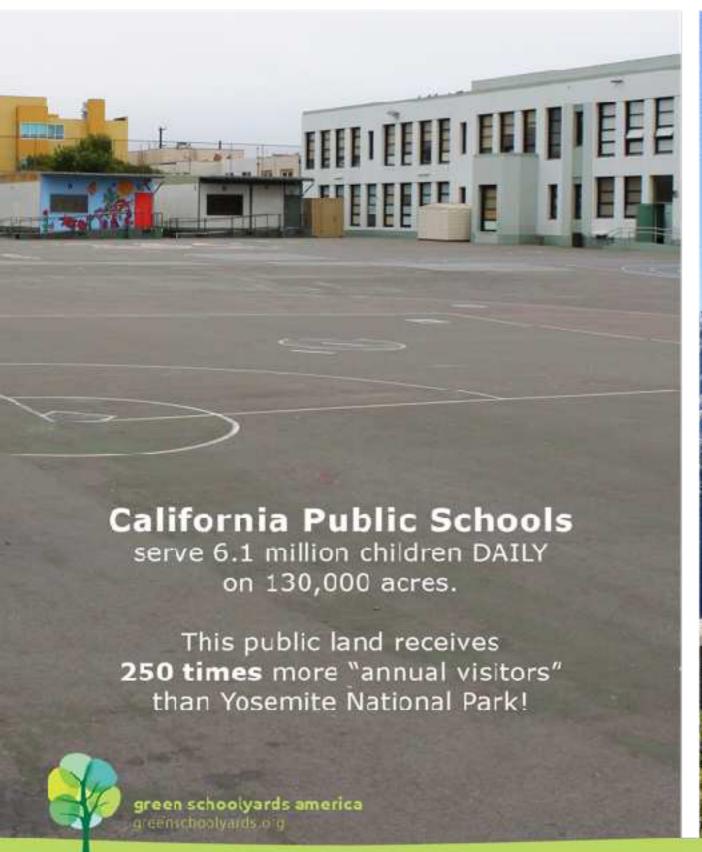
School Grounds are Important to Building Resilient Cities

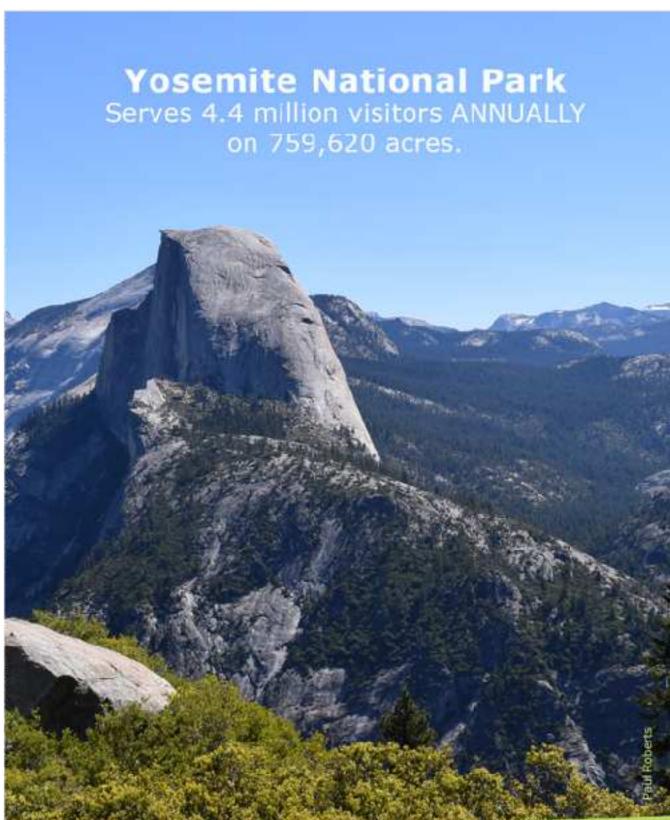
Greening school grounds supports urban resilience and can mitigate climate change.

Developing school grounds as child-friendly green infrastructure can support local ecological systems, build wildlife corridors, infiltrate stormwater, cool urban heat islands, improve air quality, and sequester carbon.



If every school had a living schoolyard, every child would experience nature every day.





National COVID-19 Outdoor Learning Initiative

Reopening Schools with Outdoor Learning













National COVID-19 Outdoor Learning Initiative

MISSION

- Support schools and districts around the country in their efforts to reopen safely and equitably
- Use outdoor spaces as strategic, cost-effective tools to maximize the number of students who can safely return to campus with physical distancing measures in place
- Improve outcomes for learning, mental and physical health, and happiness













Benefits of Outdoor Learning During COVID

- Fresh air outside greatly reduces the risk of virus transmission
- Increased meeting space for classes, so more students can return to school more often
- Outdoor seating areas can be placed near resources for hands-on learning
- Being outside improves access to nature, which has therapeutic mental health benefits:
 - reduces stress
 - restores ability to pay attention











Benefits of Outdoor Spaces

- Useful at any scale:
 from one teacher taking her
 class outside to read a book
 under a tree, to a grander
 vision of 100% of students
 returning to outdoor
 classrooms across an entire
 school district
- Suitable for a variety of school programs:
 - PE and recess
 - Lunch and other meals
 - Library, art, music, garden, and other special classes
 - Before/after school programs













Historic precedent

100 years ago, schools around the world went outside to reduce the spread of tuberculosis and Spanish flu.

Outdoor learning is a time-tested approach to keeping school open during a pandemic.











National COVID-19 Outdoor Learning Initiative

STRATEGY

- Reframe outdoor learning as "Plan A"— and online and indoor options as "Plan B"
- Help schools and districts create plans to move as many classes and school programs as possible into school grounds and parks
- Use low-cost materials to create outdoor classrooms
- Invest in permanent items if longterm use is possible
- Plan for local weather (heat, rain, snow, wind)











Equity is Central

- Return students to campus where they can access a safe, stable environment and connect with school resources most effectively
- Prioritize the most vulnerable students with the highest needs
- Include the school community in the decisionmaking processes
- Provide outdoor clothing along with infrastructure to ensure that all students are equally warm and dry as seasons change









Outdoor Learning Working Groups











National COVID-19 Outdoor Learning Initiative

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RESOURCES AND PLANNING TOOLS



Overview and Background Materials

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Online Resources

Working Groups #1 - #10

- Producing materials to create a free online "how-to manual" for taking learning outside
- Collaborating to help generate a coordinated pandemic response
- Some resources are already on our website and others will be posted soon

Working Group #11

- Convenes schools and districts to discuss plans for outdoor learning and share ideas and strategies
- Open, national public meetings every other **Tuesday**









Indoor-Outdoor Strategy

scenarios to consider to add onsite capacity

Existing Outdoor Infrastructure

seating, shelter, gardens and other resources for hands-on learning

Staff Capacity

availability, training, external support

Equity

ability to meet everyone's needs

Seasonal Climate

wind, heat, rain, snow

External Resources

nearby parks, funding for materials

Seating Placement

students face away from the sun, classrooms spaced apart for sound

Site Planning Considerations for Taking Learning Outside

Every school site and school district is different.

It is important to assess the physical characteristics of each school ground to help determine outdoor seating capacity and feasibility.









National COVID-19 Outdoor Learning Initiative

Campus Assessment for Outdoor Classroom Infrastructure

This assessment to all was developed to help school administrators and designers evaluate their school grounds and begin the site planning process that is needed to move learning ourside as schools reopen. Part 1 should be completed by the principal or other school representative. For Part 2, we recommend that the school representative collaborate with someone who has some site design experience, if possible. Part 2 will also be easier to envision while walking through the school grounds, but it may also be cone remotally using online aerial photographs and other resources.

The goal of this assessment tool is to gather information about a school site to assess the initial feasibility of outdoor learning and/or to support the implementation of a school's outdoor learning goals. This form is meant to be as comprehensive as possible. Skip any questions that are not relevent to your school.

Part 1: Context and Background Information

| School and | Sc | hool | Dist | ict |
|------------|----|------|------|-----|
|------------|----|------|------|-----|

| | | 1000 1000 below | |
|--|--|--|---|
| School Name: | | School District: | |
| School Address: | | | |
| Size of Cempus:S/T or Acres (actual or approximate) | É | Size of buildings:S/T (actual or approximate) | Urben Suburban Ruta: |
| School Mission / Special Focus / Vision: | | | Local de la constant |
| Describe your campus outdoor space : structures, a covered wellowey, and doo | je.g.: A ferced space that is ; ce in fine locations. Part of i | partly peved, partly rubber surfaced, a the campus is wooded. We have one so | nd partly laws, with a playing field, two play eting circle and eight relied garden beas) |
| Describe the types of programs and wi | tys your school grounds we | ere used before the COVID-19 crisis: (| e.g., recess, PE, garden, morning chole, etc.) |
| Are there any additional puldoor space Please list these speces by name, (e.g.) | is in your school's neighbor nearby parks, green spaces, | rhood that could be used by your stur street's) or purking lots that could be | dents curing the COVID tiles? dused, reaflops, etcl. |
| Team Members – List names and confithis assessment tool. | ntact information for anyon | ne who is supporting the completion | |
| First and Last Name | JobTite | Co | ntact Information |
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Campus Assessment Tool for Outdoor Classroom Infrastructure

- 1st step in the site planning process to record program goals and assess outdoor infrastructure needs
- This is posted on our website, on the outdoor infrastructure page.

https://www.greenschoolyards.org/ outdoor-infrastructure





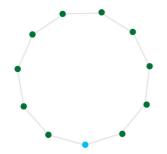




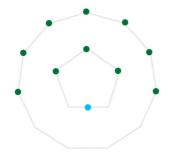
POTENTIAL OUTDOOR CLASSROOM CONFIGURATIONS WITH 6' SOCIAL DISTANCING

SCALE MODELS BELOW ASSUME EACH OUTDOOR CLASSROOM FITS PART OF A CLASS

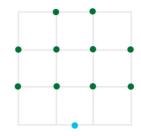
10 students + 1 adult



Circle: 21' diameter

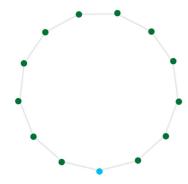


Amphitheater: 22' dia. outside & 10' dia. inside

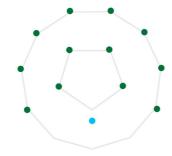


Grid: 18' x 18'

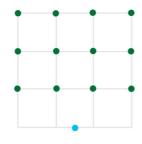
12 students + 1 adult



Circle: 25' diameter

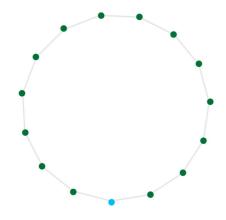


Amphitheater: 22' dia. outside & 10' dia. inside



Grid: 18' x 18'

14 students + 1 adult

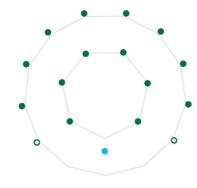


Circle: 29' diameter

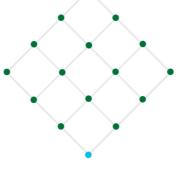
green schoolyards america

greenschoolyards.org

A project of Earth Island Institute



Amphitheater: 25.5' dia. outside & 13.5' dia. inside (14 – 16 students)



Grid: 18' x 18' (rotated)



Class Configuration

How much space does each outdoor classroom need, if everyone is 6' apart outside?

Most schools want to seat ~15 students.

Seating: ~30'x30' space

Shelter: ~40' x 40' canopy











School Characteristics

Students

- 828 students in grades K-5
- 33 K-5 classes
- 6 preschool classes
- 2 of the preschool classes and 2 of the K-5 classes serve students with autism

School Grounds

- Suburban location
- 12.8 acres on school grounds
- Campus has 2 buildings
- This school is adjacent to two busy streets and a quiet neighborhood.

Climate

- This region has four distinct seasons: colorful crisp fall weather, mild winter with light snowfall, warm wet spring, and hot, humid summers.
- Frequent year round precipitation:
 ~120 days per year
- Annual rainfall: 43" per year
- Annual snowfall: 22" per year
- Temperatures during the school year generally range from lows ~24°F in January to highs ~85°F in September and May.















Site Photographs



Photographs, top row to bottom row

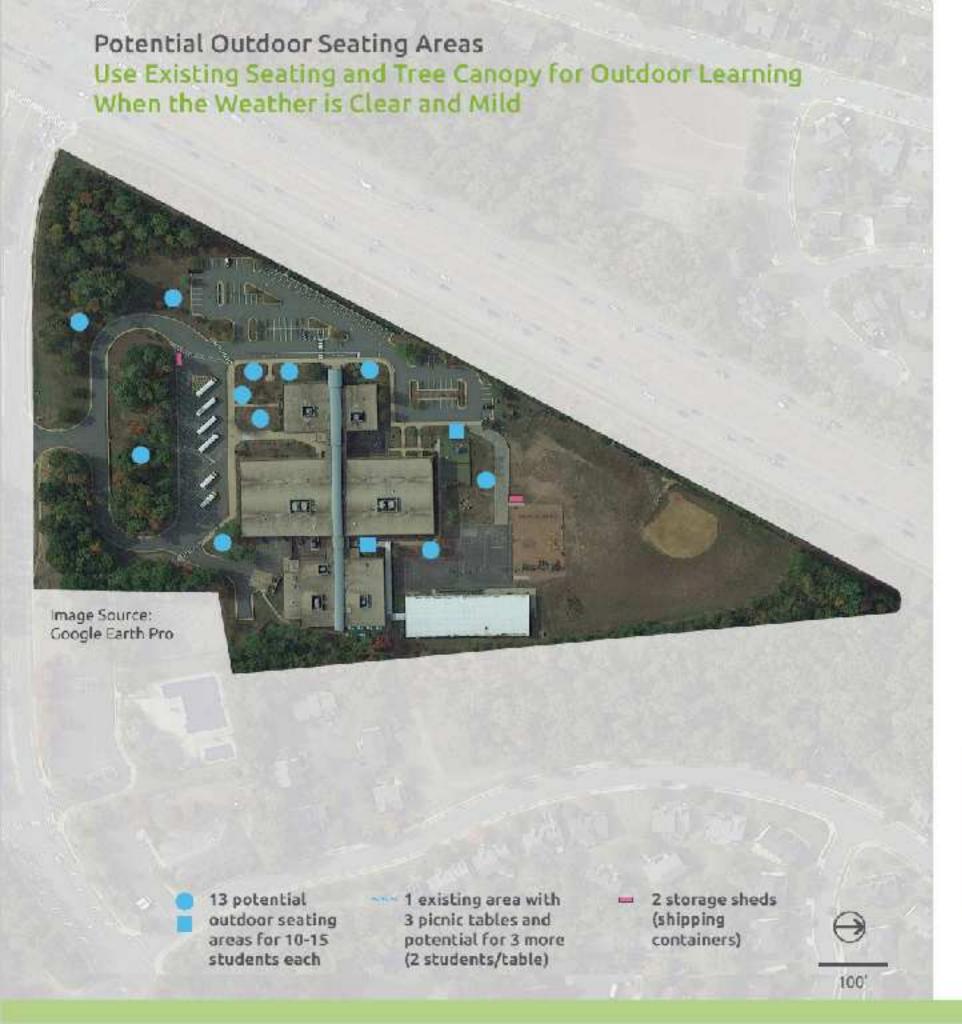
- Many spacious, flat areas with grass and trees surround the school buildings.
- The school grounds include several existing outdoor classroom spaces, nestled in the woods or near trees.
- There are expansive paved areas in the playground (bottom left) and in the existing bus parking lot (bottom right).











Scenario #1: Low Cost

Climate Considerations

- Local climate varies seasonally
- Classes will require protection from sun and rain, 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
- Place seating in areas with existing tree canopies to provide shade

Use and Augment Existing Infrastructure

- Use five existing seating areas with picnic tables, benches, and stumps
- Use nine grassy areas with shade trees and add low cost seating (mats, stumps, benches, and/or existing desks/tables)
- Add storage sheds for class materials
- Preserve space for PE and recess
- Assume students will not stay seated all day; plan to use spaces adjacent to seating areas for hands-on learning

Scenario #1: Outdoor Capacity

- Max: 207 students in 14 seating areas
- · Capacity: 25% of enrolled students
- 14 of the school's 39 classes could use an outdoor learning space









Scenario #2: Moderate Cost

Climate Adaptation Strategies

Build on Scenario #1:

- Install shelters to protect classes from sun and rain
- Add outdoor heaters and/or provide rain and snow gear so students will be dry and warm when weather is wet and cold

Use and Augment Existing Infrastructure

- Add seating to create new outdoor classroom areas
- Close bus parking lot to traffic during school hours and use pavement for additional outdoor classroom space
- Add plants in large containers to make classes on pavement and open areas more inviting
- Add storage sheds for class materials (1 per grade or per 5-6 classes)
- Prepare designated preschool yards for small social bubbles
- Preserve space for PE and recess

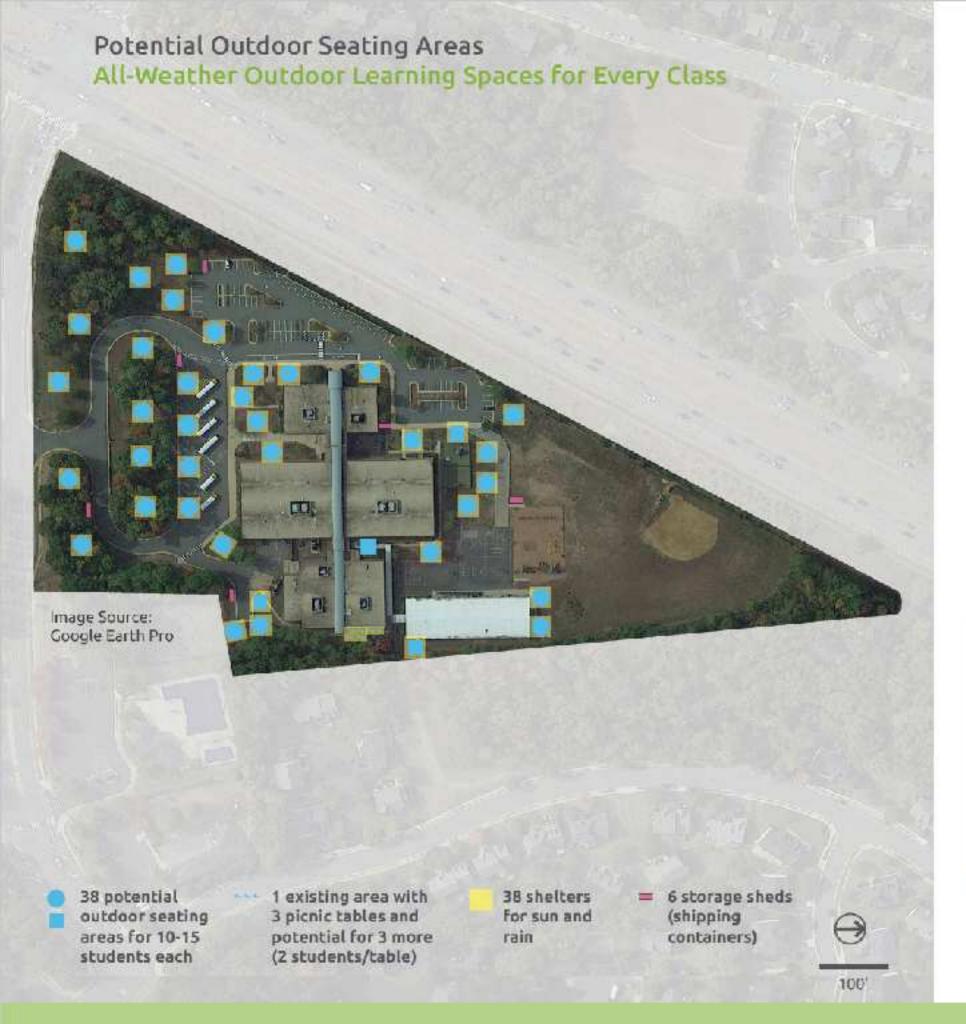
Scenario #2: Outdoor Capacity

- · Max: 447 students in 32 seating areas
- · Capacity: 57% of enrolled students
- 32 of the school's 39 classes could use an outdoor learning space









Scenario #3: Infrastructure Investment to Include Forested Land

Investment in Future Outdoor Learning

- This school site includes beautiful forested areas that are currently underutilized by students.
- Add a fence to the edge of the school grounds, near the road.
- Selectively clear some of the dense understory in the forested areas to make clearings to accommodate classes.
- Add shelters to ensure that every classroom space is protected from the weather.
- Where possible, add outdoor heaters to make the outdoor classrooms more comfortable during the winter.

Scenario #3: Outdoor Capacity

- Max: 582 students in 39 seating areas
- Capacity: 70% of enrolled students
- 39 of the school's 39 classes could use an outdoor learning space
- If only 50% of students are on campus each day, every class could be held outside, year-round, if desired.
- If 100% of students return, 50% could be inside and 50% outside







Potential Outdoor Seating Areas Map Key For Alternate Scenarios Image Source: Google Earth Pro Existing area with Storage sheds Potential (shipping 3 picnic tables and outdoor seating areas for 10-15 potential for 3 more containers) students each (2 students/table) 100

Elementary School Northern Virginia

Map Key

Color Coded Scenarios

- Scenario #1: Low Cost
- Scenario #2: Moderate Cost
- Scenario #3: Infrastructure Investment

Notes

- The number on each outdoor learning area corresponds with a planning chart that provides additional information about what may be needed in each location.
- The letters identify outdoor storage sheds that will hold classroom materials.
- Recommendation: Assign adjacent outdoor classroom spaces to classes in the same grade level, so that the teachers may share materials in a nearby storage shed and plan for children with similar needs.
- Preschool classes will need their own designated outdoor spaces that are designed differently than K-5 areas.
- Outdoor spaces that serve children with autism should be designed in close collaboration with their teachers.
- The asphalt playground and sports field have been left unobstructed to allow space for PE classes, sports games, and potential use by the local community.







Directions: 1) Please begin by reading the document entitled, "Outdoor Infrastructure Planning Strategies for Taking Learning Outside as Schools Reopen". Use this document to make a site plan for your outdoor learning needs, including the number and placement of desired outdoor classrooms. Make a note of which of these outdoor spaces have existing infrastructure, and what will be needed for new spaces. 2) Use the cost calculator below to select the types the options you are considering for each outdoor classroom. The infrastructure and supply options listed below are related to: seating, shade and rain shelters, health and hygiene, teaching materials and storage, and landscape improvements that will enhance the outdoor learning experience. There is also an option for mobile outdoor classroom gear, for classes that will meet in a local park or that will use variable locations on the school grounds.)





___Outdoor

Classrooms

S

Assumptions: 1) The following cost estimates are based on an assumption that most K-12 schools will divide their classes into smaller groups for onsite instruction. For the purpose of this estimate, we are assuming those "1/2 class" groups each include between 12-16 students. To calculate cost per 1/2 class, we have used 16 students in the chart below.

2) The "Unit Cost" listed for each item (in Column F) reflects the retail prices of items sourced from the corresponding link, listed on each line. As you refine your own cost estimate for your school, replace these initial estimates in the "Unit Cost" column with the actual cost of items you select. Unit costs below do NOT include sales tax, delivery, or installation unless noted. Lower prices might be available for bulk purchases from some manufacturers. The links are for reference only, and are not meant as endorsements of these products.

Version: 5/26/2020

| Item Description | Unit Type | Estimated Price Range Per Unit | # of Units Needed Per Class | | lt Cost | Total Cost Per Class of 12-16 Students | Number of Classes Per School | | l Cost Pe |
|--|----------------|-----------------------------------|-----------------------------------|----|---------|--|---------------------------------|----|-----------|
| | | | | | | | | | |
| Portable Seating for Students and/or Teachers | 1 | | | | | | 3 | | |
| Use existing indoor desks/chairs - move outside (for students and teachers) | per person | \$0 | 17 | \$ | 200 | \$ - | | \$ | 2.0 |
| Outdoor seat cushion - stadium style | per student | \$6 - \$40 | 16 | \$ | 7 | \$ 107 | | \$ | |
| Outdoor seat cushion - w/backrest | per student | \$16 - \$50 | 16 | \$ | 15 | \$ 256 | | \$ | |
| Folding chair - camping style, for younger students | per student | \$15 - \$40 | 16 | \$ | 30 | \$ 480 | | \$ | 29 |
| Folding chair - camping style with sunshade, for teachers and/or older students | per person | \$45 - \$220 | 31 | \$ | 60 | \$ 50 | | \$ | - |
| Rustic Seating - Natural materials, assembled w/community participation | | | | | | | | | |
| Log Rounds - rustic, from an arborist or park department | per student | \$0 - varies | 16 | 5 | := | \$ - | | S | - |
| Large Tree Trunks (8') - professionally finished as seating, roughly \$100/linear ft | per 2 students | \$800 | 8 | \$ | 1,500 | \$ 12,000 | | \$ | - |
| Straw bales (organic or pesticide free) | per student | \$20 | 16 | \$ | 20 | 30 U-02000-000 | | \$ | Ş. |
| Commercially Produced Benches and Picnic Tables | | / | | | | Ĺ | \perp | | |
| Picnic Table (6' or 8') | per 2 students | \$200 - \$1,500 | 8 | \$ | 650 | \$ 5,200 | ſi | \$ | 1 |
| Park-Style Bench (8') | per 2 students | \$250 - \$1,500 | 8 | \$ | 870 | \$ 5,960 | | \$ | - |
| Bench to Table (5') | per student | \$250 - \$450 | 16 | \$ | 250 | \$ 4,000 | | \$ | : |
| | | 360 | | | | (| | | |
| | | | | | | | Total Seating Cost | 4 | |



Mobile Equipment

What do teachers and students need to bring with them outside?

STUDENTS

Tote bag or backpack to carry:

- Water bottle
- Seat cushion
- Clip board
- Pencils
- Sun hat
- Sunscreen
- Weather-appropriate clothing
- Notebooks/books
- Hand sanitizer











Mobile Equipment

TEACHERS

A wagon or cart to carry:

- Water bottle
- Folding chair
- White board
- Clip board with emergency contact information
- Writing materials
- Sun hat
- Sunscreen
- Weather-appropriate clothing
- First aid kit
- Hand sanitizer











Emergency Schoolyard Design Volunteers

This program matches schools and districts with design teams to help plan outdoor classroom layout!

Schools sign up here: https://bit.ly/Schools-sign-up

Designers sign up here: https://bit.ly/Design-sign-up

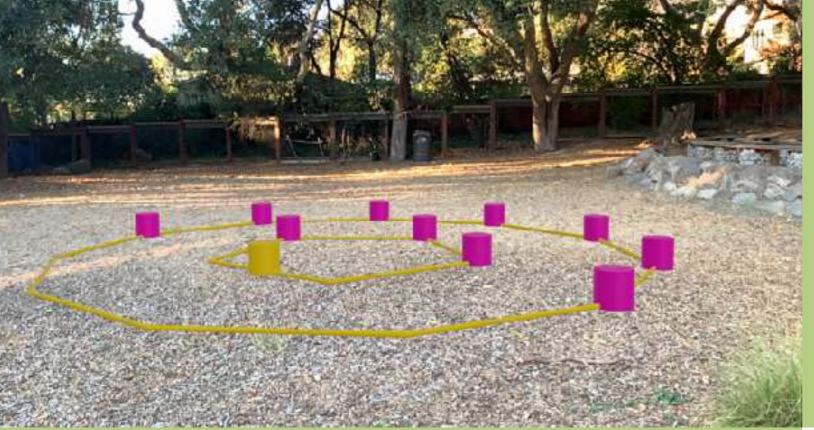












Augmented Reality Outdoor Classroom Simulation

- New, free tool simulates what outdoor classroom spaces will look like in your own schoolyard
- Based on our site plans for outdoor seating 6' apart
- Developed by Sean Corriel
- Requires an iPhone running Safari
- Beta software













Recorded

Outdoor Learning Health Webinar

How to use outdoor learning spaces to help control COVID-19 transmission as schools reopen

Speakers:

Dr. Caesar Djavaherian, M.D.

Co-founder and Medical Director at Carbon
Health

Dr. Nooshin Razani, M.D. M.P.H. Associate Professor of Epidemiology and Biostastics and Pediatrics, and Founder and Director, Center for Nature and Health, UCSF

https://bit.ly/COVID-Health-Outside











What Does Outdoor Learning Look Like in Action, During COVID?

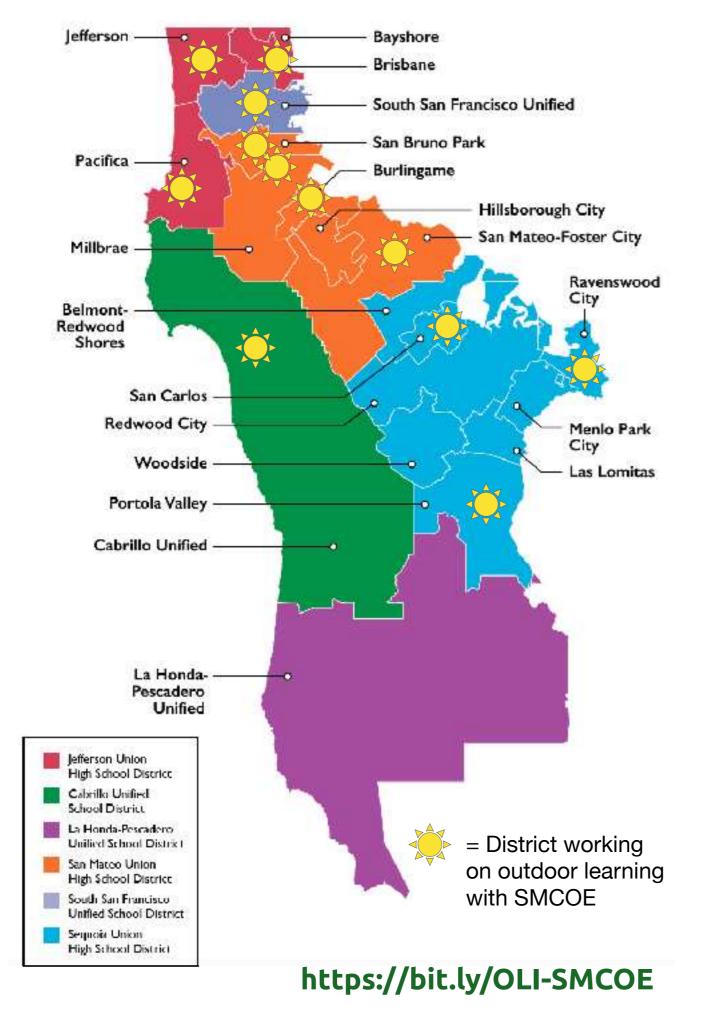
Case studies on our website











San Mateo County Office of Education (SMCOE)

SMCOE is collaborating with 12 school districts to put plans in place for outdoor learning.

- Portola Valley School District has opened for K-2, using outdoor classrooms in their daily routine. Others will be opening soon.
- SMCOE is supporting school districts by helping to assess their sites, provide guidance on outdoor infrastructure, and connect to community partners.
- Some SMC private schools have reopened using outdoor classrooms. SMCOE is partnering with them to document best practices.















Portland Public Schools

Portland, Maine

- 17 schools
- 6,750 students in PK-12

COVID Reopening Plan

- 5,000+ students chose a hybrid learning model
- 156 new outdoor classrooms
- 204 outdoor easels
- 33 shelters
- Warm clothing
- 50% of teachers now report using outdoor learning on a regular basis

https://bit.ly/OLI-PortlandPS

















Linden Waldorf School

Nashville, Tennessee

- ~200 K-8 students
- 9 new outdoor classrooms
- Custom designed
- City building permits
- Initial concept to installation in 5 weeks!
- Classes opened in September
- 100% of students outside 95% of each day

https://bit.ly/OLI-Linden











Golestan Education

El Cerrito, California

- Independent school
- 100 children PK-3
- Reopened preschool and summer camps June 22nd, opened school Sept. 5th with a waiver
- 2 classes 100% outside
- 4 classes open walled and frequently outside

https://bit.ly/OLI-Golestan



















Scaling Outdoor Learning as a Pandemic Response

Many districts across the country have plans in place or in progress.

Most are not yet discussing them publicly because tensions are high.

The bigger an institution is, the longer it takes.

Key barriers:

- Mindset shift to outdoors
- Permission
- Funding
- Communication with teachers' unions











Large Scale Equity Problems

Existing building codes and planning processes are not set up to meet the needs of this health emergency.

- VARIATION: By state and location
- STANDARDS: Multiple standards and building codes for public, charter, and private schools
- COST: Can be 5 10 times more expensive to build shelters at a public school
- TIME: Generally takes months rather than weeks to move from concept to useable space
- RISK: Public schools are left with more risk and poor outcomes as a result
- SCARCITY: Competition for tents











Strategies to Set Districts Up for Success

- Mindset shift: Support outdoor learning as Plan A
- Help the teachers get comfortable outdoors first
- Assess and use existing resources before investing in new infrastructure
- Encourage creative thinking and pilot / prototype development for localized solutions
- Standardize "classroom kits" for district-wide implementation, to simplify ordering (several options)











Strategies to Set Districts Up for Success

- Think beyond outdoor classrooms, to include meals, physical education, specialty classes, and before/after care programs
- Build partnerships with local organizations and nonformal education institutions (e.g. museums)
- Coordinate infrastructure with local agencies (e.g. parks departments, city governments)
- Share information and lessons learned
- Prioritize children's happiness as a design goal











What do districts need to move forward?

- Leadership from the top at the state and local levels
- Policies at the state and local levels that support outdoor learning, remove roadblocks, and provide permission and administrative support
- Coordination and rapid mobilization, like we have seen for restaurants
- Automatic approvals for a selection of carports, tents and other lightweight shelters that are fast and inexpensive to install











What do districts need to move forward?

Funding to:

- Build and maintain outdoor infrastructure
- Support additional staff to allow smaller classes, usually required for COVID
- Buy weather-appropriate clothing to ensure equity











What Do Districts Need to Move Forward?

- Professional development training to increase teacher comfort with outdoor instruction
- Outdoor Wi-Fi access for schools that would like it
- Collaboration at all levels of scale, from school boards and district administration to unions, school communities, and students











The field is at a tipping point.

We are seeing a significant shift in mindset across the country.

The time to act is now.

School grounds are a major asset that can be mobilized.

Outdoor infrastructure is centrally important both for immediate COVID-19 response and for longterm use.

Invest now to solve the crisis, and reap benefits in the years to come.









National COVID-19 Outdoor Learning Initiative

Move toward a greener, healthier future outside



https://www.greenschoolyards.org/covid-learn-outside