

Outdoor Spaces as Essential Assets for School Districts' COVID-19 Response





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Art by Autumn Dawn Gomez
(Taos Pueblo / Comanche)
@pimikwusii





Welcome

Purpose of this meeting
Team Introductions
Participant Introductions
Padlet

Host Organizations and Presenters



greenschoolyards.org

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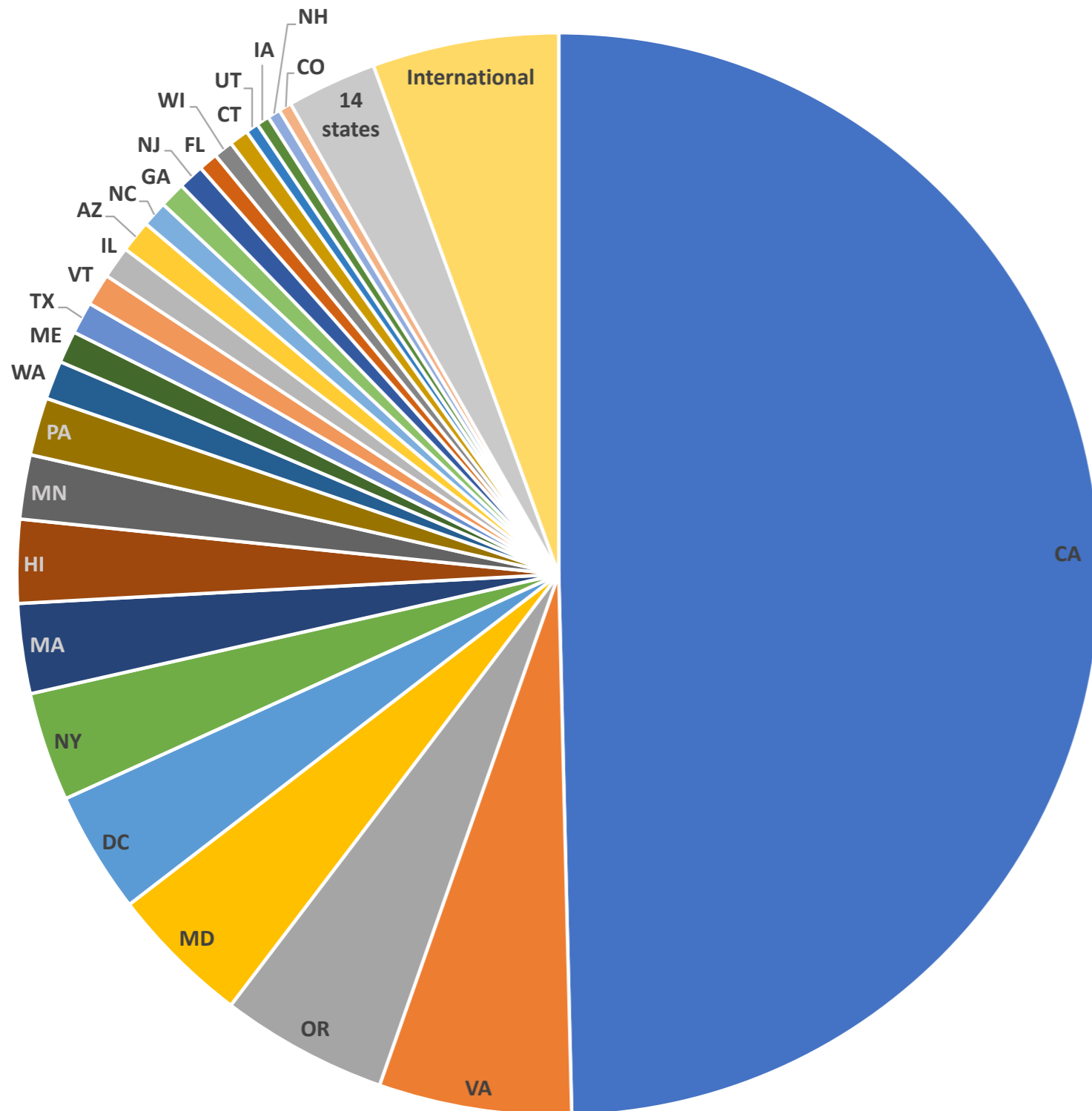


tenstrands.org

Karen Cowe, MBA
CEO, Ten Strands

Vanessa Louise Carter, MA
Ecoliteracy Content Specialist
San Francisco Unified School
District

Participants



**A warm welcome
to our participants!**

Thank you for joining us
from 40+ states across
the USA and 8 countries!

Share Your Ideas and Feedback

We invite you to share your ideas and feedback during the meeting today using an online system called Padlet.

To participate, please visit this link:

<https://padlet.com/jforeman6/learnoutside>





Our Plans Today

Share our initial ideas about how outdoor learning can be an asset for school districts' COVID-19 response

Gather an interdisciplinary community to join us in expanding this vision and putting it into practice



Ideas in Progress

There are many different ways that outdoor learning may be implemented across the country.

This idea is adaptable to different climates, communities, ecosystems, grade levels, teaching styles, and levels of scale.

It can help individual teachers take their classes outside—and can also potentially help 100% of students to return to school.



Agenda

- Overview and framing
- Breakout session #1
- Explore what it might look like to put these ideas into practice — for both the outdoor infrastructure and the educational program
- Breakout session #2
- Next steps and invitation to participate in an ongoing dialogue



Working Groups

We are beginning a 6 week planning process that will use working groups to develop strategies, ideas, and frameworks to assist districts across the country.

1. Ensuring equity
2. Outdoor Infrastructure
3. Park/school collaboration
4. Staffing and instructional models
5. School program integration
6. Health and safety considerations
7. Local and state policy shifts
8. Funding and economic models

We hope you will join us.

We will talk more about how to sign up to participate at the end of the meeting.



Problem Statement

Physical distancing will be required next fall, but our schools were not built to accommodate students 6 feet apart.

The National Council on School Facilities and Cooperative Strategies LLC estimate that most schools will only be able to fit

~60%
of students

in their classrooms with the required spacing.



Online learning in the last three months has not been working well for many students.

Results:

- Increasing inequalities
- Learning loss
- Mental health crisis
- Reduced physical fitness
- Parents can't go back to work with children home
- Education sector is facing large scale budget cuts and job loss



Benefits of Outdoor Learning

- More space to accommodate students, so a higher percentage of students can return to school more of the time
- Hands-on learning opportunities
- Fresh air—less risk of virus transmission outside
- Mental health benefits of nature



Vision

Use outdoor spaces on school grounds and in nearby parks to create places for classes to meet.

Infrastructure needs:

- Basic seating
- Protection from the elements
- Outdoor teaching supplies and clothing
- Places to store teaching materials



Adapt the Scale and Design to the Place

Scale and design will vary and will reflect the climate and site configuration

Consider multiple locations

- On the school grounds
- In nearby parks
- Bussing to parks that are not within walking distance



Integrate Programs

Plan to coordinate outdoor classroom needs with the needs of PE classes, elementary school recess, and before/after school programs



Consider Staffing Needs

Bring in additional educators temporarily to share the teaching load for classes that are split into smaller groups



Public Domain *Ecole de plein air*, Suresnes/Wikipedia, via TreeHugger



Public Domain *Ecole de plein air*, Suresnes/Wikipedia, via TreeHugger

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.

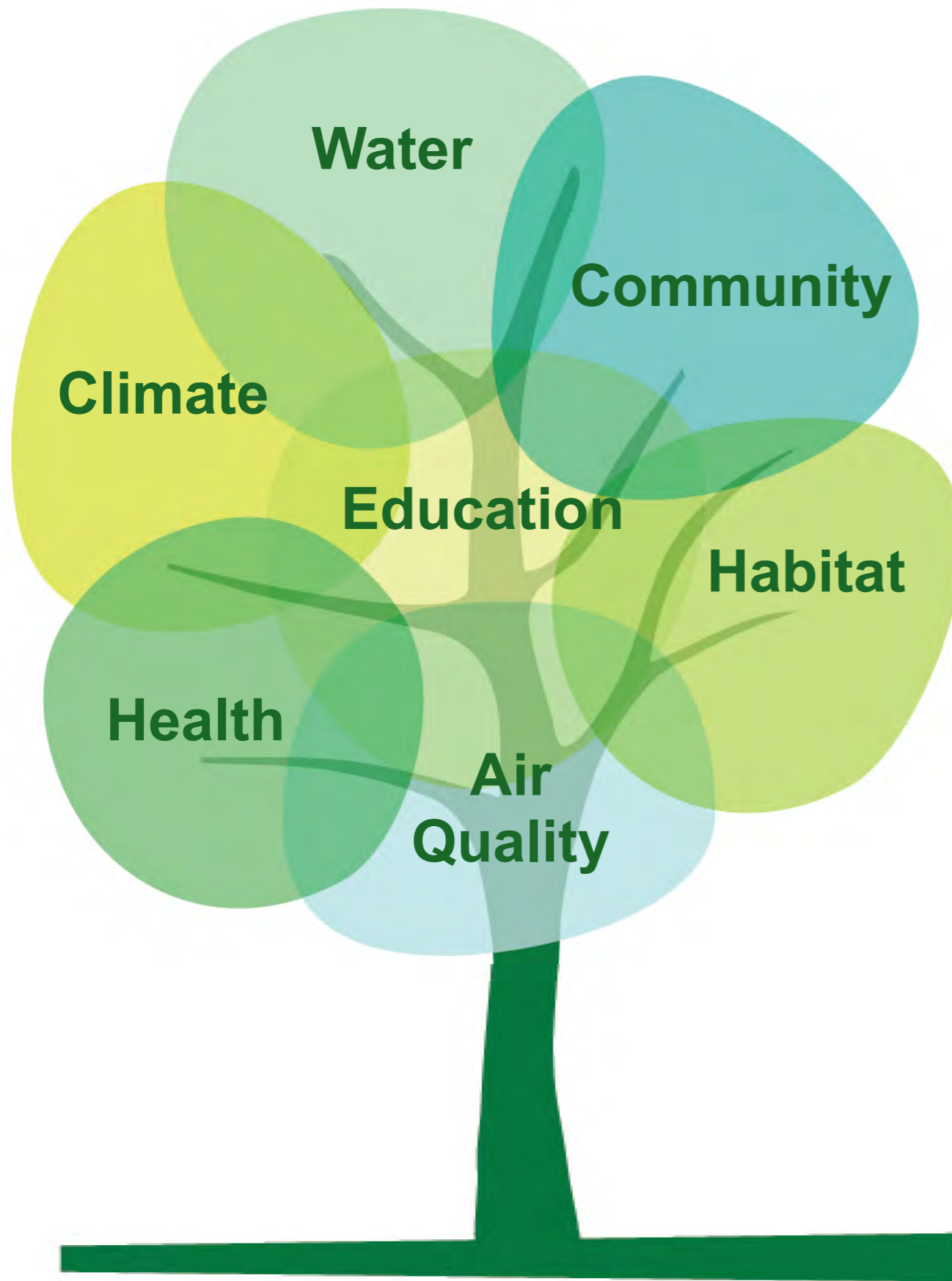


Green Schoolyard Movement

Existing 30+ year old movement focused on helping schools use their grounds for outdoor learning and adding nature to school landscapes

Hundreds of organizations and thousands of schools across the country are already working on this in some way

This expertise will be a great asset for bringing this idea into practice.



Resilient Cities

Green schoolyards support urban resilience in the face of climate change.

Developing school grounds as child-friendly green infrastructure supports local ecological systems, builds wildlife corridors, infiltrates stormwater, cools urban heat islands, improves air quality, and sequesters carbon.

Planning considerations as schools reopen

Equity

How can school districts structure reopening plans to ensure equitable access to a high quality education and learning environment?

Location

Where will learning take place with physical distancing requirements?

- Online
- Inside
- Outside on school grounds
- Outside at parks

Learning

How can schools reconfigure their programs, teaching methods, staffing, and schedules to make it possible to return?

- Stagger schedules
- Reconfigure internal staffing assignments
- Bring in educators from outside organizations
- Integrate planning for recess, PE, and before/after care

Wellbeing

What's best for children's learning, health, and happiness as they return to school?

- Support mental health
- Promote physical health
- Provide opportunities for social-emotional engagement
- Nurture special needs
- Foster creativity, imagination, and happiness

Funding

How will we pay for this?
What is the impact on the economy if students are not back on campus full time?

- Cost neutral approach
- External funding
- Quantify economic impact of remaining partly closed
- Consider outdoor investments to be tools for resilience and learning

Breakout Groups

What is most exciting to you about this idea?

What are the most compelling messages for different stakeholder groups?

- school districts
- park staff
- informal education institutions
- principals
- teachers
- students
- parents
- informal educators
- facility managers

What are you curious about?

To contribute your ideas to the discussion via Padlet, please visit the link below and add your comments to the first three columns:

<https://padlet.com/jforeman6/learnoutside>



What could outdoor learning look in the fall?

Outdoor infrastructure planning strategies

Ideas for reconfiguring educational models, programming, and staffing

Site Planning Considerations



Planning considerations for taking learning outside

Every school site is different.

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

POTENTIAL OUTDOOR CLASSROOM CONFIGURATIONS WITH 6' SOCIAL DISTANCING

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

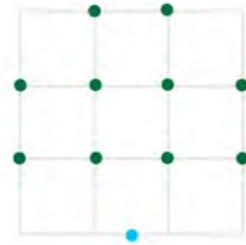
10 students + 1 adult



Circle: 21' diameter



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

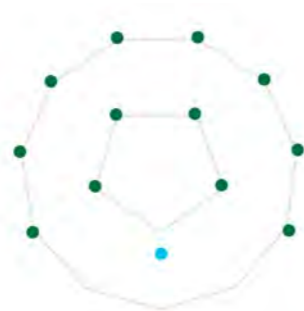


Grid: 18' x 18'

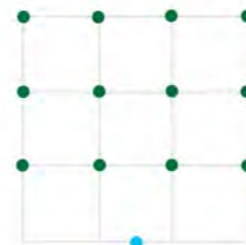
12 students + 1 adult



Circle: 25' diameter

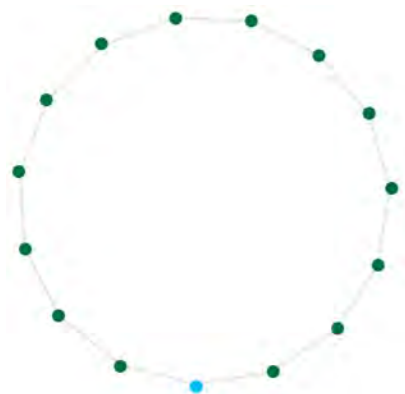


Amphitheater:
22' dia. outside & 10' dia. inside



Grid: 18' x 18'

14 students + 1 adult



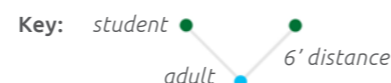
Circle: 29' diameter



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



Grid: 18' x 18'
(rotated)



Outdoor Learning Case Studies

What could outdoor learning look like at schools with different climates, campuses, and programs?

The two elementary school examples that follow are thought experiments to explore variations on this idea.

Image Source: Google Earth Pro



Elementary School Los Angeles Area, CA

School Characteristics

Students

- 558 students in grades K-5
- 28 classes, across all grade levels
- COVID-19 response:
Exploring scenarios where students are in smaller groups (e.g. half classes)

School Grounds

- Suburban location in Southern California, on 9.1 acres
- Campus has 18 separate buildings
- Each classroom has two external doors; all “hallways” are outside
- This school is not close to a park.

Climate

- Very hot, dry climate, often over 100° F
- The weather is only cool enough to be comfortable outside from November to May, even in the shade.
- Santa Ana winds usually blow strongly through the city in October.

Elementary School Los Angeles Area, CA

Site Photographs



Photographs, clockwise from top

1. View of the school buildings, playground, and shade tree
2. Solar panels shade part of the parking lot at the front of the school
3. Classrooms open directly to the outside; small groups already meet outside on the shadier north side of the buildings

Potential Outdoor Seating Areas

Use Existing Infrastructure to Spread Out

Image Source: Google Earth Pro



● 14 potential outdoor seating areas for 12-16 students each

■ 27 potential outdoor seating areas for 7 students each

●●● 2 existing covered picnic areas for 16 and 24 students



100'

Elementary School Los Angeles Area, CA

Scenario #1: Low Cost

Climate Constraints

- Limit outdoor classroom use to cooler months (November - May)
- Avoid outdoor learning when the Santa Ana winds are strongest in October.

Shade Strategies

Place seating in areas with existing shade structures and deep shadows:

- Add outdoor seating under existing tree canopies
- Use existing shade from covered walkways on the north and west sides of each classroom building
- Close traffic in front driveway during the school day; use shade below solar panels

Seating Strategies

- For seating on hardscape, move existing indoor desks outside
- For seating under trees, use movable mats

Scenario #1: Outdoor Seating Capacity

- Max: 453 students in 43 seating areas
- 16 outdoor spaces can accommodate half a class
- 27 additional spaces would be useful for small group work, near classrooms

Potential Outdoor Seating Areas

Expand Capacity Using Shade Canopies and Simple Seating

Elementary School

Los Angeles Area, CA

Scenario #2: Small Infrastructure Investment

Shade Strategies

Build on Scenario #1 to add more shade:

- Add retractable, cloth shade canopies (12'-15' wide), suspended on wires between classroom buildings to better protect students from heat and expand seating capacity in those areas. (Retract shade canopies on cool or windy days.)

Seating Strategies

- For seating near classroom doors, move existing indoor desks outside
- For seating under solar panels, add picnic tables or other sturdy, modular seating units. Add movable barriers to driveway entrance during the school day.
- For seating under trees, use log rounds, picnic tables, benches, or mats

Scenario #2: Outdoor Seating Capacity

- Max: 636 students in 44 seating areas
- 37 outdoor spaces can accommodate half a class
- 7 additional spaces would be useful for small group work, near classrooms
- Some seating options are not ideal

Image Source: Google Earth Pro



14 potential outdoor seating areas for 12-16 students each



6 seating areas for 7 students each
22 seating areas for 10-15 students each



2 existing covered picnic areas for 16 and 24 students



8 shade canopies



100'

Potential Outdoor Seating Areas
Optimized: 50% of Enrolled Students Can Sit Outside

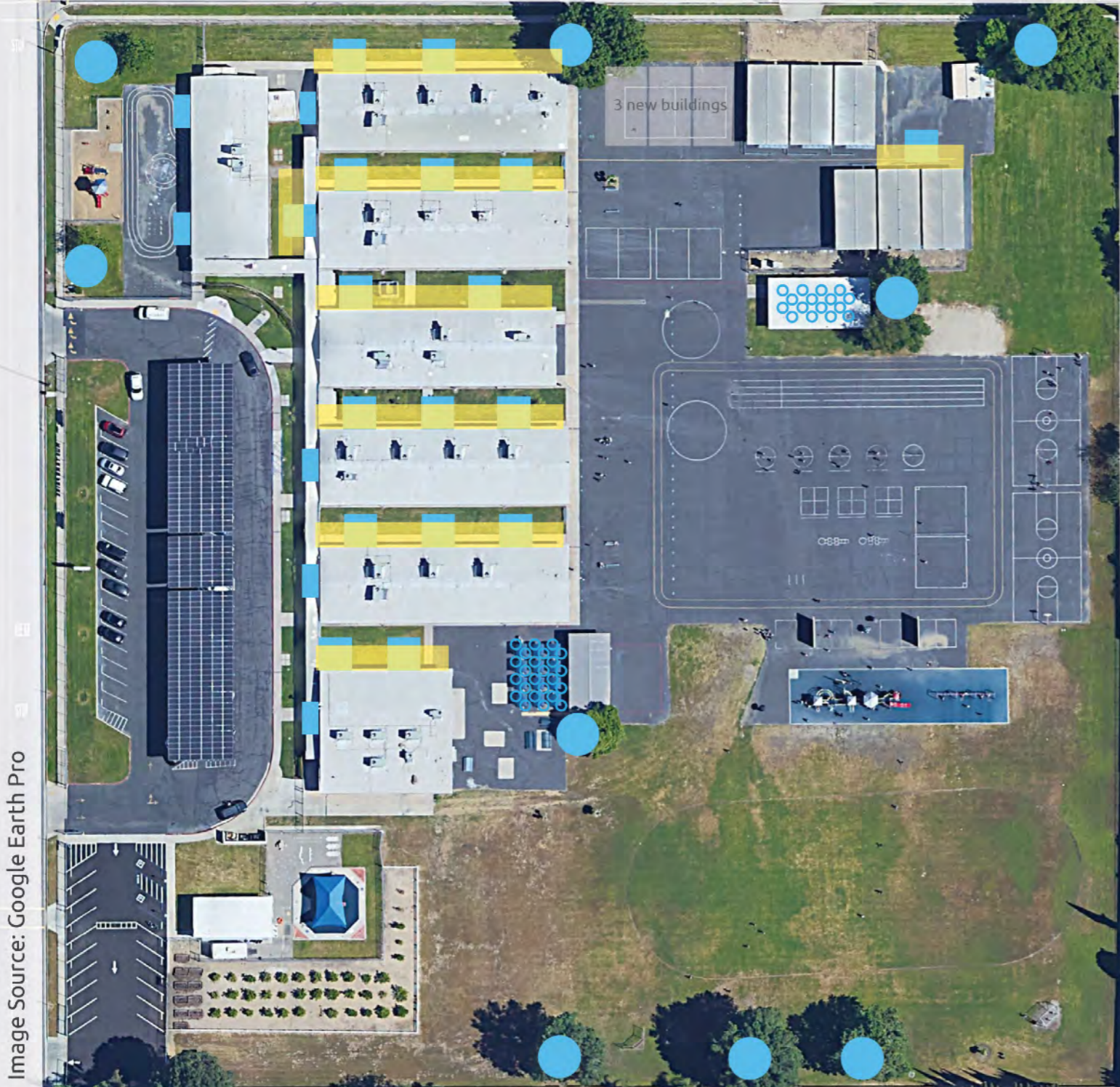


Image Source: Google Earth Pro

- 9 potential outdoor seating areas for 12-16 students each
- 6 seating areas for 7 students each
- 17 seating areas for 10-15 students each
- 2 existing covered picnic areas for 16 and 24 students
- 8 shade canopies

Elementary School
 Los Angeles Area, CA

**Scenario #3:
 Infrastructure Aligned
 with Education Program**

Assumptions

- Each class will have its own reserved indoor room *and* outdoor space for up to 16 students and 1 teacher
- Students will not be seated all day. The outdoor spaces for each class will be used for hands-on learning.
- Most of the playground and field will remain open for PE classes and recess

Strategy for Site Selection and Program

- Position outdoor classes to maximize convenience, comfort, and space for physical education classes and recess
- Include 28 outdoor classroom spaces large enough for half a class

Scenario #3: Outdoor Seating Capacity

- Max: 481 students in 34 seating areas
- 28 outdoor spaces for half a class + 6 spaces for small group work
- If only 50% of students are on campus each day, every class could be held outside, if desired
- If 100% of students return, 50% could be inside and 50% outside

Elementary School San Francisco Bay Area, CA

School Characteristics

Students

- 225 students in grades K-5
- 9 classes, across all grade levels

School Grounds

- Urban location
- 4.9 acres on school grounds + 4.7 acre city park (adjacent)
- Campus has 3 buildings, connected by interior hallways
- This school is adjacent to a city park.

Climate

- Warm, sunny, temperate climate with pleasant temperatures most of the year
- Strong winds sometimes blow across the school grounds
- Occasional rain November - March



Elementary School San Francisco Bay Area, CA

Site Photographs



Photographs, from top to bottom

1. View of the school building and the park in the distance
2. Views of existing garden seating areas on the school grounds
3. Areas of the park with shade trees



Potential Outdoor Seating Areas Seating for 50% of Classes on School Grounds



School Grounds

City Park

● 9 potential outdoor seating areas for 12-16 students each

■ 1 shade tent

■ 2 tool sheds (shipping containers)



100'

Elementary School San Francisco Bay Area, CA

Scenario #1: Low Cost, Onsite

Climate Considerations

- Mild climate is comfortable most of the year and requires minimal protection from sun and rain

Shade Strategies

- Place seating in areas with existing tree canopies, where possible
- Add shade tents for spaces in full sun
- Consider additional tents for days with light rain in the winter

Seating Strategies

- Use existing picnic tables, seat walls, log rounds, and benches where available; add more seating where needed
- Assume students will not stay seated all day. Use the two existing gardens and other areas for hands-on learning.
- Add tool sheds for teaching materials
- Preserve space for PE and recess

Scenario #1: Outdoor Capacity

- Max: 144 students in 9 seating areas
- If only 50% of students are on campus each day, every class could be held outside onsite, if desired
- If 100% of students return, 50% could be inside and 50% outside onsite

Potential Outdoor Seating Areas

Seating for 100% of Classes on School Grounds and in the Park

Elementary School

San Francisco Bay Area, CA

Scenario #2: Expand from School Grounds to the Park

Special Considerations for Park Classes

- Create a joint use agreement to allow park space to be used for classes
- Collaborate with local organizations to expand teaching staff; provide one educator for each half class
- Request parent permission to go offsite

Seating and Supplies

- Equip each child with a backpack containing: clipboard, sun hat, water bottle, and portable seat cushion
- Establish specific locations for each class to meet at the park in the shade
- Decide if classes will return to school for lunch, or if lunch will be at the park

Safety and Stewardship

- Plan for daily park stewardship with students to avoid litter
- Check park for safety and sanitation each morning before school begins; monitor public use of bathrooms

Scenario #2: Outdoor Capacity

- Max: 288 students in 18 seating areas
- If 100% of students return, all students could have class outside, all day: 50% at school and 50% at the park

Image Source: Google Earth Pro



School Grounds

City Park

● 18 potential outdoor seating areas for 12-16 students each

■ 1 shade tent

■ 2 tool sheds (shipping containers)



100'

Outdoor Infrastructure

Temporary use
vs. longterm investment

Seating

Low cost: Use existing furniture, log rounds, outdoor cushions

Mid-range: Add picnic tables, benches, boulders

Cost/Half Class

Free - \$400

\$900 - \$8,000



Shade and Rain Shelters

Cost/Half Class

Low cost: Use existing shade trees, arbors, building overhangs, shelters

Free

Mid-range: Add awnings, shade sails, yurts, carports, event tents

~\$3,000 - \$10,000



Outdoor Teaching Supplies and Storage

Low cost: Clipboards, white boards, and other supplies

Mid-range: Garden sheds or shipping container sheds (1 per grade level)

Cost/Half Class

Free - \$500

\$1,500 - \$5,000



Comfortable Landscape

Low cost: Position outdoor seating near trees/shrubs if available

Mid-range: Add planters with new shrubs/flowers to soften paved spaces

Cost/Half Class

Free

\$500 - \$1,000





Are you designing for the margins?

Who is NOT thriving in Distance (Emergency) Learning?

- Students who were already experiencing an achievement gap, higher drop out rates, lower graduation rates
- English Language Learners
- Students with IEPs and in Special Day Classes
- Our young learners (K/1)
- Students with housing instability
- Students with food insecurity
- Students whose homes are unsafe (abuse, violence)
- Students with mental health concerns usually met by school counselors

• _____



What happens to schools' educational programs when classes are split in half to comply with physical distancing?

- Blended learning, 25% - 50% on campus, alternate days or weeks, students in cohorts, increase in custodial activity
- Spread elementary students across ES, MS & HS campuses
- Use the OUTDOORS!

Potential Education Models

Educational Program and Staffing Models

What does it look like if you shift your staffing model internally (current staff, modified roles) with Union support?

- Master Teachers present content online for entire district; all teachers facilitate small groups of students outside
- Specialists/paras/admin/librarians teach 1/2 students outside while Lead Teacher instructs 1/2 class inside

Potential Education Models

Educational Program and Staffing Models

What does it look like if you shift your staffing model internally (current staff, modified roles) with Union support?

Small Scale Pilot:

- Outdoor School for students not thriving in Distance Learning
- Central location for students from multiple schools
- Flexible Central Office Admin or Site Admin (if on school property)
- Experienced teachers with relational trust, TOSAs, local partners
- Independent of Distance Learning / Blended Learning for District

Potential Education Models

Educational Program and Staffing Models

How could school districts partner with nonformal education institutions to increase their staff of professional educators?

- Teachers and CBO Staff split classes inside/outside using outdoor space on campus and in local parks, where appropriate
- State, Federal, and Philanthropic funding
- Partnerships allow schools to meet their goals and local nonformal educational institutions to do their work (keep the lights on, keep staff employed, grow their program offerings)
- Mutual indemnification clauses in contracts (just like any experiential outdoor educational field trip partnership)
- Who? Residential outdoor programs, experiential ed field trip partners, science museum education staff, garden educator organizations, sustainability fellows, etc.

A Field at Risk: **The Impact of COVID-19 on Environmental and Outdoor Science Education**

Melissa Collins, Rena Dorph, Jedda Foreman, Aparajita Pande, Craig Strang, Aujanee Young

INTRODUCTION

During April 2020, the Lawrence Hall of Science at the University of California, Berkeley, conducted a survey to learn about the impact of the COVID-19 pandemic on the environmental and outdoor science education field nationwide. This policy brief describes the importance of this field, the findings of our survey, and recommendations for mitigating the potentially devastating threats facing this field. These recommendations were developed based on conversations with individuals at the North American Association for Environmental Education (NAAEE), the California Environmental Literacy Initiative (CAELI), and Ten Strands, as well as other organizational leaders.



WHAT COULD BE LOST

Every year, millions of people participate in environmental and outdoor science education programs (such as residential outdoor science schools, nature preschools, nature centers, parks, zoos, aquariums, science centers, and museums) that are integral to both their pre-K-12 school and their out-of-school learning. These programs engage youth in meaningful and memorable hands-on, experiential learning that is not available within traditional classrooms, resulting in myriad academic, social, and health benefits summarized here. These programs also play a significant role in providing professional development to classroom teachers nationwide that increases their content knowledge, skills, and pedagogical expertise.

How can we mitigate potential losses?

- Funding to lead with equity during recovery
- Coordinated efforts by local and state education agencies to redeploy environmental and outdoor science educators to work in K-12 school settings
- Promote the value of outdoor learning as safe, engaging, effective and essential
- Call to action coming soon!

Breakout Groups

Now let's hear from you! Please post your ideas in Padlet.

- What are you worried about?
- What are the challenges?
- What needs to be solved in order for an outdoor learning solution to work?

In your breakout rooms, please consider these questions for:

- Plans to ensure equity
- Outdoor infrastructure
- Park/school collaboration
- Staffing and instructional models
- School program integration
- Health and safety considerations
- Local and state policy shifts
- Funding and economic models

<https://padlet.com/jforeman6/learnoutside>



What do we need to move from concept to implementation?

Plans to ensure equity

Outdoor infrastructure

Park/school collaboration

Staffing and instructional models

School program integration

Health and safety information

Local and state policy shifts

Funding and economic models

Working Groups

We are convening eight working groups to explore key topics in more detail, over the next 6 weeks. Each group will develop frameworks, strategies, and resources to share with school districts and organizations around the country.

The working groups will include:

1. Plans to ensure equity
2. Outdoor infrastructure
3. Park/school collaboration
4. Staffing and instructional models
5. School program integration
6. Health and safety considerations
7. Local and state policy shifts
8. Funding and economic models

We hope you will participate! Please sign up using the survey.



Next Steps

Please complete the survey to sign up for working groups and share your thoughts about ideas presented today.

We will send a follow up email next week to everyone who registered, with additional information.

We will meet again in 6 weeks to share the working groups' products.

**Next meeting:
Late July**

Questions? Please contact
Sharon Danks

sharon@greenschoolyards.org



How can you help?

Talk with your principal, grounds and facilities managers, and/or superintendent about these ideas and invite their involvement.

Fundraise with PTO/PTA or earmark funds for supplies to ensure that outdoor learning is implemented equitably.

Offer to be the contact for your school, district, or county as resources get produced, published, and distributed.

Share the existing 2-page PDF, the recording of this webinar, and emerging resources with others—beyond your immediate work setting—when they are published.

Thank You!

