

OUTDOOR EDUCATION

safe joyful connected equitable



PHOTO BY THOMAS KUOH PHOTOGRAPHY



PHOTO BY GOLESTAN EDUCATION



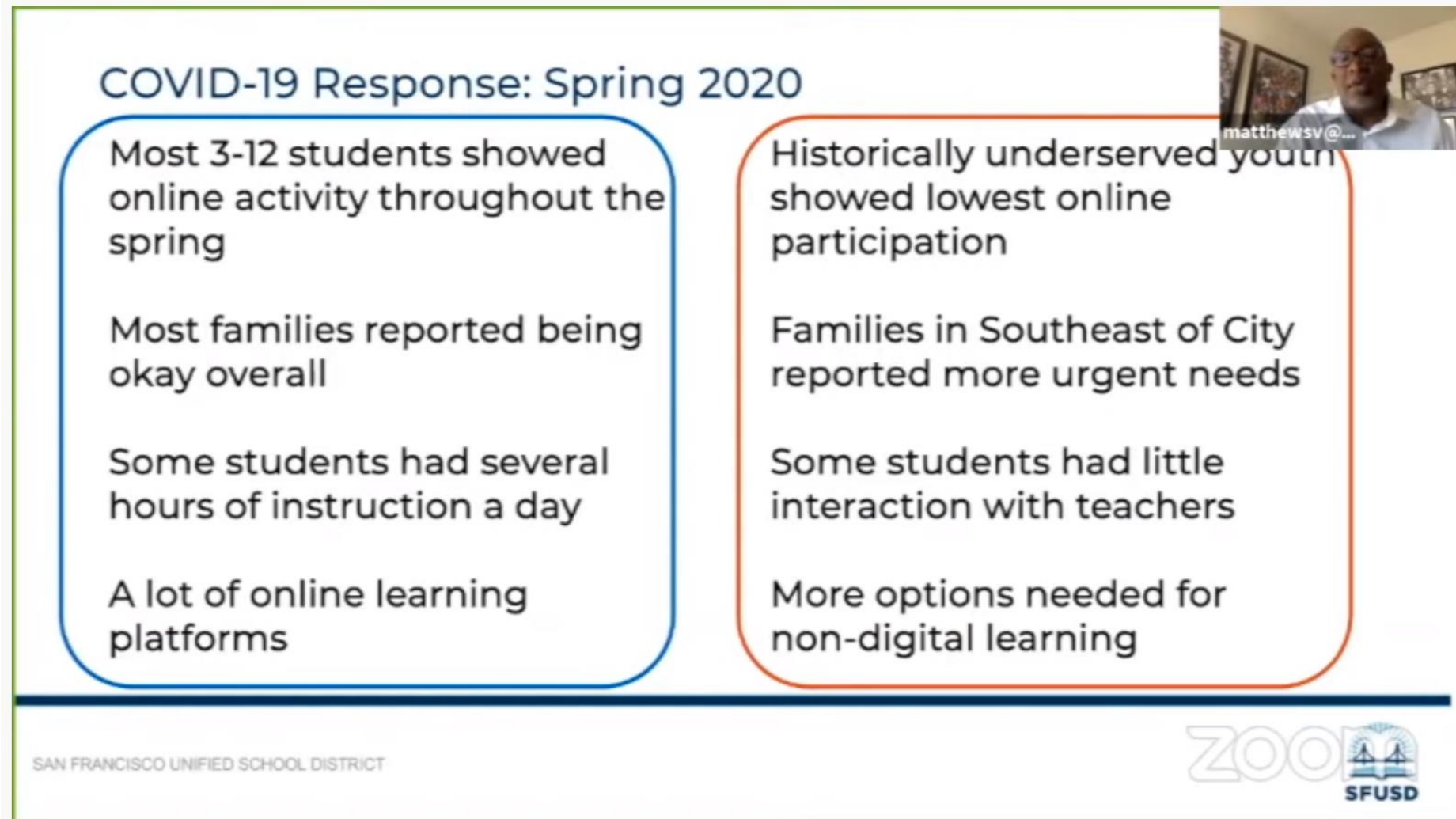
PHOTO BY THOMAS KUOH PHOTOGRAPHY

OUTDOOR EDUCATION

safe joyful connected equitable

Challenges

- The coronavirus pandemic makes it unsafe for school to continue as usual.
- But in the spring, we learned that distance learning does not work well for most learners, especially our youngest and most vulnerable students.
- Distance learning exacerbates inequities in our city by forcing parents to choose between co-teaching distance learning or working.



COVID-19 Response: Spring 2020

Most 3-12 students showed online activity throughout the spring

Most families reported being okay overall

Some students had several hours of instruction a day

A lot of online learning platforms

Historically underserved youth showed lowest online participation

Families in Southeast of City reported more urgent needs

Some students had little interaction with teachers

More options needed for non-digital learning

matthewsv@...

SAN FRANCISCO UNIFIED SCHOOL DISTRICT

ZOOM SFUSD

OUTDOOR EDUCATION

safe joyful connected equitable

Solutions

- Outdoor education is a much safer way to go back to school – studies have shown that viral loads are up to 20 times less and transmission rates are significantly lower.
- Outdoor cohorts is an already proven model. RecPark and YMCA have been helping families with childcare throughout the pandemic.
- If we can scale up, outdoor education is equitable. In-person instruction is critical for young learners and vulnerable populations and outdoor education can safely provide that.
- Outdoor education has been shown to deliver academic, social, and emotional benefits to students and teachers.



**Reopening TK-12 Schools for In-Person, On-Site Instruction
Preliminary Guidance for School Year 2020-2021**

Ventilation and Outdoor Spaces

Increasing outdoor air circulation lowers the risk of infection by “diluting” any infectious respiratory droplets with outdoor air. Being outside is even lower risk.

- Use outdoor space for instruction and meals/snacks as much as possible.
- Open windows and doors to increase circulation of outdoor air, if it is safe to do so and does not worsen individuals’ allergies or asthma.
- Consider designating outdoor spaces for each cohort and marking boundaries to make sure that students stay in their cohort when outdoors.
- Limit use of shared playground equipment in favor of activities that have less contact with shared surfaces.
 - If used, outdoor playgrounds/natural play areas only need routine maintenance. Make sure the children wash or sanitize their hands before and after using these spaces. When hand hygiene is emphasized, cleaning and disinfection are not required between cohorts.



BIG CITY

Schools Beat Earlier Plagues With Outdoor Classes. We Should, Too.

A century ago, children in New York City attended classes during a pandemic. It seemed to work.



OPEN AIR SCHOOL. NYC 2014-9



PUPIL IN OPEN-AIR SCHOOL, PROVIDENCE 44-10

OUTDOOR EDUCATION

safe joyful connected equitable

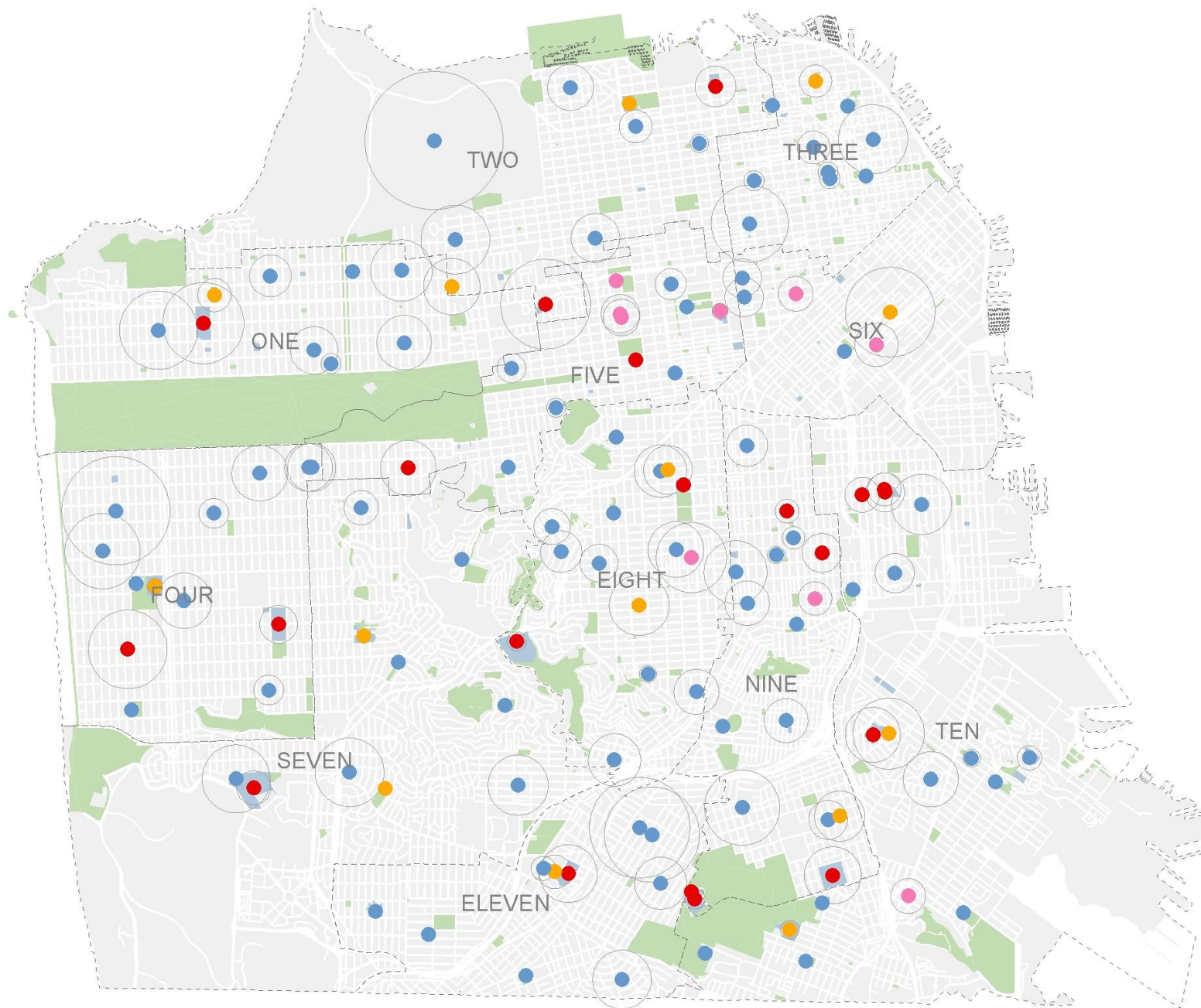
Resources

- San Francisco is rich in open space, especially close to elementary schools
- SFUSD has been investing in outdoor education for over a decade. There is some on-site infrastructure and some trained staff
- Organizations such as Green Schoolyards America can provide training, curriculum, cost estimates and case studies for teachers and administrators.
<https://www.greenschoolyards.org/covid-learn-outside>



PHOTO BY GOLESTAN EDUCATION

Average distance to a park from PK, PK/K-5 or PK/K-8 is 700 Feet



Grades (average distance to park)

- PK, PK/K-5, or PK/K-8 (700 ft)
- 6–8 (740 ft)
- 6-12 or 9-12 (800 ft)
- Charter or County (680 ft)

■ Recreation & Parks

■ SFUSD

○ Distance to nearest park
(0.25 mi shown here for
reference)

**116 out of 130 USD schools
are within 0.25 mi of a park.**

**All 130 USD schools are
within 0.5 mi of a park.**

OUTDOOR EDUCATION

safe joyful connected equitable

POTENTIAL OUTDOOR CLASSROOM CONFIGURATIONS WITH 6' SOCIAL DISTANCING

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

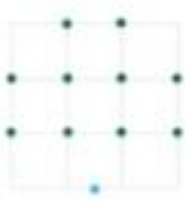
10 students + 1 adult



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)



COVID-19 Planning: Outdoor Classroom Infrastructure Cost Calculator

Summary: The cost calculator sheet below is intended to be used with a companion document that describes outdoor classroom planning strategies, to help estimate infrastructure costs for a wide variety of outdoor infrastructure options.

Directions: 1) Please begin by reading the document entitled, "Outdoor Infrastructure Planning Strategies for Making Learning Outside an Effective Option?" 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 of options you are considering for each outdoor classroom. The infrastructure and supply options listed below are related to seating, shade and rain shelter, 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.

Assumptions: 1) The following cost estimates are based on an assumption that most K-12 schools will divide their classes into smaller groups for remote instruction. For the purpose of this estimate, we are assuming these "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 3) 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 retail 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 where 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: 6/24/2020 - Please note: This document is a living document. Visit for website apps for an updated, expanded version in the coming weeks.
<https://www.greenschoolyards.org/infrastructure>

Item Description	Unit Type	Estimated Price Range Per Unit	# of Units Needed Per Class	Unit Cost	Total Cost Per Class of 12-16 Students	Number of Classes Per School	Total Cost Per School	
Seating for Students and/or Teachers								
Use existing tables/benches (if none available for students and teachers)	per person	\$0	17	0	0	0	0	
Outdoor use outdoor stadium seats	per student	\$5 - \$40	16	2	32	0	32	
Outdoor use outdoor wheelchair	per student	\$25 - \$50	16	3	48	0	48	
Table/desk - carrying table, for younger students	per student	\$25 - \$40	16	3	48	0	48	
Table/desk - carrying table with wheels, for teachers and/or older students	per person	\$45 - \$120	2	90	180	0	180	
Seating - Natural materials, essential to community participation								
Log stools - made from an antique or park structure	per student	\$0 - varies	16	0	0	0	0	
Large Tree Trunks (2") professionally finished as seating, roughly \$200/trunk & 1/2	per 2 students	\$400	8	3,200	3,200	0	3,200	
Stone tables (organic or petrified tree)	per student	\$20	16	320	320	0	320	
Commercially Produced Benches and Picnic Tables								
Picnic Table (6' or 8')	per 2 students	\$100 - \$1,000	8	800	8,000	0	8,000	
Park Style Bench (6')	per 2 students	\$150 - \$1,000	8	800	8,000	0	8,000	
Bench or table (2')	per student	\$120 - \$400	16	1,920	19,200	0	19,200	
Total Seating Cost for _____ Outdoor Classrooms							\$	-

Item Description	Unit Type	Estimated Price Range Per Unit	# of Units Needed Per Class	Unit Cost	Total Cost Per Class of 12-16 Students	Number of Classes Per School	Total Cost Per School	
Event Style Tents (10' x 10' would be ideal, but is hard to find)								
10' x 20' event party tent (temperatures fluctuate)	per class	\$100	1	100	100	0	100	
10' x 20' commercial high-back frame tent (\$1,000 - outdoors \$800)	per class	\$1,000 - \$1,500	1	1,400	1,400	0	1,400	
10' x 30' commercial frame tent (\$1,500 - outdoors \$800)	per class	\$1,500 - \$4,000	1	3,000	3,000	0	3,000	
10' x 40' commercial frame tent (\$4,000 - outdoors \$800)	per class	\$4,500 - \$5,000	1	4,500	4,500	0	4,500	
Parapets, metal or wood - standardized commercial products, or custom								
11' x 16' Aluminum parapet with retractable cloth canopy	per 1/2 class	\$1,900	2	3,800	3,800	0	3,800	
12' x 16' - Solid wood parapet with retractable cloth canopy	per 1/2 class	\$4,800	2	9,600	9,600	0	9,600	
Canopies								
8' x 10' - lightweight shade canopy, metal frame, polyethylene top	per 1/2 class	\$120	2	240	480	0	480	
10' x 10' - lightweight shade canopy, metal frame, polyethylene top	per 1/2 class	\$120	2	240	480	0	480	
10' x 10' - lightweight, all-steel canopy, metal frame, metal roof	per 1/2 class	\$1,000	2	2,000	4,000	0	4,000	
10' x 10' - Vertical roof canopy, all metal (if top legs) - customizable size, optional side walls (\$100/each) - bulk discounts available - price includes delivery and installation, sales tax is extra, price varied by state	per 1/2 class	\$4,000	1	4,000	4,000	0	4,000	
10' x 10' - Customizable size - priced for \$4,400, metal frame and roof	per class	\$4,400	1	4,400	4,400	0	4,400	
Tables								
12' x 12' - lightweight aluminum outdoor canopy carrying table	per 1/2 class	\$400	2	800	1,600	0	1,600	
14' x 14' - sturdy wood framed/curved, weatherproof for concrete	per class	\$10,000	1	10,000	10,000	0	10,000	
Shade Sails, Benches, and Umbrellas								
16' x 16' - Rectangular shade sail, attach to existing building	per 1/2 class	\$16	2	32	64	0	64	
10' - Triangular shade sail, attach to existing building	per 1/2 class	\$19	2	38	76	0	76	
8' x 10' - Rectangular fabric patio covering, attach to existing building	per 1/2 class	\$200	2	400	800	0	800	
11' Patio shade umbrella - for use with a picnic table and/or stool	per 2 students	\$100 - \$200	8	100	800	0	800	
11 stools for picnic tables - one per picnic table	per 2 students	\$40 - \$120	8	80	640	0	640	
Total Shelter Cost for _____ Outdoor Classrooms							\$	-

Outdoor Classroom Configuration Options

Outdoor Infrastructure Cost Estimate Tool

OUTDOOR EDUCATION

safe joyful connected equitable

Actions

- Establish that outdoor education is plan A for getting back to in-person instruction
- Choose a scale that is feasible and work on logistics and funding district-wide.
 - **Example:** all TK and K teachers get an outdoor educator partner to cut class size in half for manageable outdoor learning.
- Engage corporate and philanthropic partners to fund staff to partner with SFUSD teachers outdoors, employing young people who are passionate about outdoor education and have lost their jobs. Partners could include RecPark, YMCA, DCYF, and Academy of Sciences.
- Encourage SFUSD to set a strong framework but allow creativity at the school level so that we can test new models and share lessons learned.

OUTDOOR EDUCATION

safe joyful connected equitable

Outcomes

- Low-risk, in-person learning
- Improved social-emotional learning for all students, teachers, and staff
- In-person education for all, not just those who can afford it
- Employment for San Francisco's outdoor educators
- Reduced stress and improved work capacity for San Francisco's working parents

Alternative if we don't act

Increased psychosocial and fiscal effects on all children and families, especially our most vulnerable. Family stress. Lower quality educational opportunities. Increase in the achievement gap. Lack of physical activity and all the negative impacts stemming from that. Less help for vulnerable students. Anxiety. Loneliness. Lack of motivation.

Recent Press on Outdoor Education

Schools Beat Earlier Plagues With Outdoor Classes. We Should, Too.

<https://www.nytimes.com/2020/07/17/nyregion/coronavirus-nyc-schools-reopening-outdoors.html?referringSource=articleShare>

Pods, Microschools and Tutors: Can Parents Solve the Education Crisis on Their Own? (note: Rooftop ES featured)

<https://www-nytimes-com.cdn.ampproject.org/c/s/www.nytimes.com/2020/07/22/parenting/school-pods-coronavirus.amp.html>

PBS News Hour piece on Green Schoolyards America work

<https://www-pbs-org.cdn.ampproject.org/c/s/www.pbs.org/newshour/amp/show/a-california-collective-makes-the-case-for-outdoor-schooling>

Outdoors Covid Risk (media):

<https://www.sfchronicle.com/news/article/Is-risk-of-coronavirus-transmission-lower-15287602.php>

Philadelphia and outdoor learning:

<https://whyy-org.cdn.ampproject.org/c/s/whyy.org/articles/some-philly-schools-to-use-outdoor-classrooms-when-irl-lessons-resume/amp/>

The New England Journal of Medicine (peer-reviewed publication) on school reopening.

<https://www.nejm.org/doi/full/10.1056/NEJMms2024920>

Brown University publication on negative impact of virtual schools

<https://edworkingpapers.com/sites/default/files/ai20-250.pdf>

Public Policy Institute of California on challenges of detecting child abuse with online education

<https://www.ppic.org/blog/school-closures-hamper-monitoring-of-child-welfare/>

Online education widens the economic gap

<https://www.nytimes.com/2020/06/05/us/coronavirus-education-lost-learning.html>

NWEA brief on learning losses in COVID-19 (emphasis on younger children)

https://www.nwea.org/content/uploads/2020/05/Collaborative-Brief_Covid19-Slide-APR20.pdf

Students with disabilities don't benefit from online learning

<https://www.chalkbeat.org/2020/3/12/21178761/schools-that-go-remote-for-coronavirus-must-keep-serving-students-with-disabilities-can-any-really-d>

Special Ed in times of COVID-19

<https://www.theatlantic.com/education/archive/2020/04/special-education-goes-remote-covid-19-pandemic/610231/>

The Atlantic: on crucial role of socializing

<https://www.theatlantic.com/family/archive/2020/06/how-quarantine-will-affect-kids-social-development/613381/>