## COVID-19 Planning: Outdoor Classroom Infrastructure Cost Calculator

Summary: The cost calculator chart below is intended to be used with a companion document that describes outdoor classroc infrastructure costs for a wide variety of outdoor infrastructure options.

Directions: 1) Please begin by reading the document entitled, "Outdoor Infrastructure Planning Strategies for Taking Learning ( make a site plan for your outdoor learning needs, including the number and placement of desired outdoor classrooms. Make a existing infrastructure, and what will be needed for new spaces. 2) Use the cost calculator below to select the types the option The infrastructure and supply options listed below are related to: seating, shade and rain shelters, health and hygiene, teachin improvements that will enhance the outdoor learning experience. There is also an option for mobile outdoor classroom gear, f 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 purpose of this estimate, we are assuming those " $1 / 2$ class" groups each include between $12-16$ students. To calculate cost pe below.
2) The "Unit Cost" listed for each item (in Column F) reflects the retail prices of items sourced from the corresponding link, list estimate for your school, replace these initial estimates in the "Unit Cost" column with the actual cost of items you select. Uni installation unless noted. Lower prices might be available for bulk purchases from some manufacturers. The links are for refere these products.

Version: 6/26/2020 -- Please note: This document is still in development. Visit our website again for an updated, expanded ve http://www.greenschoolyards.org/covid-learn-outside

| Item Description |  | Unit Type |
| :--- | :---: | :---: |
|  |  |  |
| Estimated Price |  |  |
| Range Per Unit |  |  |$|$

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|  | Folding chair - camping style, for younger students | per student | \$15-\$40 |
| :---: | :---: | :---: | :---: |
|  | Folding chair - camping style with sunshade, for teachers and/or older students | per person | \$45-\$220 |
|  | Rustic Seating - Natural materials, assembled w/community participation |  |  |
|  | Log Rounds - rustic, from an arborist or park department | per student | \$0-varies |
|  | Large Tree Trunks (8') - professionally finished as seating, roughly \$100/linear ft | per 2 students | \$800 |
|  | Straw bales (organic or pesticide free) | per student | \$20 |
|  | Commercially Produced Benches and Picnic Tables |  |  |
|  | Picnic Table (6' or 8') | per 2 students | \$200-\$1,500 |
|  | Park-Style Bench (8') | per 2 students | \$250-\$1,500 |
|  | Bench to Table (5') | per student | \$250-\$450 |
|  |  |  |  |
|  |  |  |  |


|  |  | Estimated Price <br> Range Per Unit |
| :--- | :---: | :---: |
|  | Unit Type |  |
| Event Style Tents (30' $\times 30$ ' would be ideal, but is hard to find) |  |  |
| $20^{\prime} \times 20^{\prime}$ steel party tent (temporary structure) | per class | $\$ 320$ |
| $20^{\prime} \times 20^{\prime}$ commercial high peak frame tent $(\$ 2,900)+$ sidewalls $(\$ 800)$ | per class | $\$ 2,900-\$ 3,700$ |
| $20^{\prime} \times 30 '$ commercial frame tent $(\$ 3,300)+$ sidewalls $(\$ 800)$ | per class | $\$ 3,300-\$ 4,100$ |
| $20^{\prime} \times 40^{\prime}$ commercial frame tent $(\$ 4,500)+$ sidewalls $(\$ 800)$ | per class | $\$ 4,500-\$ 5,300$ |
|  |  |  |
| Pergolas, metal or wood - standardized commercial products, or custom |  |  |
| $11^{\prime} \times 16^{\prime}-$ Aluminum pergola with retractable cloth canopy | per $1 / 2$ class | $\$ 1,900$ |
| $12^{\prime} \times 16^{\prime}-$ Solid wood pergola with retractable cloth canopy | per $1 / 2$ class | $\$ 4,800$ |
|  |  |  |
| Carports |  |  |

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Note: Most outdoor classroom configurations that accommodate 12-16 students will be at least 20'-25' in diameter with physi snow shelter is required, plan for a canopy/roof that is $5^{\prime}-10^{\prime}$ wider in diameter than the seating, to allow for movement and a least $30^{\prime} \times 30^{\prime}$. Some shelters may also require side panels.

|  |  | Estimated Price <br> Range Per Unit |
| :--- | :---: | :---: |
|  | Unit Type |  |
| Sun Hats Each adult and child may need a hat to reduce UV exposure. |  |  |
| Bring hats from home (each person supplies their own) | per person | NA |
| School supplies hats for every person who does not have one, or matching hats for <br> everyone (for equity and school spirit) | per person | $\$ 10-\$ 40$ |
| $\underset{山}{u}$ | Outdoor Handwashing Facilities |  |

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|  | Portable bottles of hand-sanitizer (no infrastructure) - each student to wash hands 3+ times/day with hand sanitizer, $\$ 0.02 /$ use with Purell Advanced, as per estimate from National Council for School Facilities | per student per use | \$0.02 |
| :---: | :---: | :---: | :---: |
|  | Handwashing station (table, cleaning supplies, no plumbing) | per 3 classes? |  |
|  | Outdoor handwashing sink with 5-6 wash basins (plumbing) | per 3 classes? |  |
|  | Restroom Access |  |  |
|  | Use existing restrooms in school building or park (see note) | per class | \$0 |
|  | Rent "port-a-potties" and accompanying hand-washing stations | per 2 classes? | varies; $\sim \$ 175 /$ month for 10 months |
|  |  |  |  |
|  |  |  |  |
|  | Item Description | Unit Type | Estimated Price Range Per Unit |
|  | Materials for Teachers |  |  |
|  | Outdoor table, for the teacher to use to organize materials | per class | \$150-\$500 |
|  | Whiteboard with study base, for use outside | per class | \$40-\$250 |
|  | Dry erase markers and eraser (2 sets of 16 markers) | per class | \$25-\$50 |
|  | Portable microphone and speaker to amplify the teacher's voice, if needed | per class | \$35-\$150 |
|  | Sturdy storage shed (approx. 1 shed per 4 classes) | per grade | \$300-\$6,000 |
|  |  |  |  |
|  | Materials for Students |  |  |
|  | Clipboards for each child | per student | \$1-\$4 |
|  | Class sets of: pencils, pens, dry erase markers, pencil sharpeners -- Not included in this estimate. Assume that existing indoor supplies can be brought outside. | per student | varies |
|  | Other class-specific materials (e.g. hand lenses, measurement tools, books, etc.) | per student | varies |


|  |  |  |
| :--- | :--- | :--- |


|  | Item Description | Unit Type | Estimated Price Range Per Unit |
| :---: | :---: | :---: | :---: |
|  | Container Garden Infrastructure, to create a welcoming environment |  |  |
|  | Metal planting beds (galvanized stock troughs), 100 gal 2'x2'x4' example used here many sizes available - most durable option, easy to maintain | per class | \$80-\$100 |
|  | Wooden planting beds, made from wine barrels | per class | \$40-\$50 |
|  | Large plastic pots (20" diameter or larger) | per class | \$15-\$25 |
|  | Garden hose, to connect with accessible hose bib (50'-100' long) - drinking water safe hose | per class | \$60-\$100 |
|  | Soil and Plants, to fill container gardens |  |  |
|  | Large, flowering shrubs, appropriate for local climate | per plant | \$20-\$40 |
|  | Potting soil for container gardens (w/o pesticides or chemicals) | per cubic ft | \$3-\$8 |
|  |  |  |  |

Note: Estimated cost of a basic container garden, placed to surround a new outdoor classroom on asphalt, will be approximate

|  |  |  | Estimated Price <br> Range Per Unit |
| :--- | :--- | :---: | :---: |
| Item Description | Unit Type |  |  |
|  | Standardized Kits for Each Student |  |  |
|  | per person | $\$ 20-\$ 60$ |  |

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## For more information, please contact:

Sharon Danks, Green Schoolyards America -- sharon@greenschoolyards.org
Andra Yeghoian, San Mateo County Office of Education -- ayeghoian@smcoe.org
https://sites.google.com/smcoe.org/smcoe-


| \# of Units <br> Needed Per <br> Class | Unit Cost | Total Cost Per <br> Class of 12-16 <br> Students | Number of Classes <br> Per School | Total Cost Per <br> School |
| :---: | ---: | ---: | ---: | :--- |
|  |  |  |  |  |
|  |  |  |  |  |
| 17 | $\$$ | - | $\$$ | - |
|  |  |  |  |  |
| 16 | $\$$ | 7 | $\$$ | 107 |
|  |  |  |  |  |
| 16 | $\$$ | 16 | $\$$ | 256 |
|  |  |  | \$ |  |

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| 16 | \$ | 30 | \$ | 480 |  | \$ | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | \$ | 60 | \$ | 60 |  | \$ | - |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| 16 | \$ | - | \$ | - |  | \$ | - |
| 8 | \$ | 1,500 | \$ | 12,000 |  | \$ | - |
| 16 | \$ | 20 | \$ | 320 |  | \$ | - |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| 8 | \$ | 650 | \$ | 5,200 |  | \$ | - |
| 8 | \$ | 870 | \$ | 6,960 |  | \$ | - |
| 16 | \$ | 250 | \$ | 4,000 |  | \$ | - |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  | Total Seating Cost for $\qquad$ Outdoor Classrooms | \$ | - |



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| 2 | \$ | 238 | \$ | 476 |  | \$ | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2 | \$ | 235 | \$ | 470 |  | \$ | - |
| 2 | \$ | 1,011 | \$ | 2,022 |  | \$ | - |
| 1 | \$ | 4,020 | \$ | 4,020 |  | \$ | - |
| 1 | \$ | 4,425 | \$ | 4,425 |  | \$ | - |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| 2 | \$ | 500 | \$ | 1,000 |  | \$ | - |
| 1 | \$ | 10,000 | \$ | 10,000 |  | \$ | - |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| 2 | \$ | 79 | \$ | 158 |  | \$ | - |
| 2 | \$ | 73 | \$ | 146 |  | \$ | - |
| 2 | \$ | 200 | \$ | 400 |  | \$ | - |
| 8 | \$ | 150 | \$ | 1,200 |  | \$ | - |
| 8 | \$ | 80 | \$ | 640 |  | \$ | - |
|  |  |  |  |  |  |  |  |
| cal distancing measures in place. If a sun, rain, or dequate protection. Look for shelters that are at |  |  |  |  | Total Shelter Costs for $\qquad$ Outdoor Classrooms | \$ | - |


| \# of Units <br> Needed Per <br> Class | Unit Cost | Total Cost Per <br> Class of 12-16 <br> Students | Number of Classes <br> Per School | Total Cost Per <br> School |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
| 0 | $\$$ | - | $\$$ | - |
| 16 | $\$$ | 10 | $\$$ | 160 |

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| $\begin{array}{c}\text { \# of Units } \\ \text { Needed Per } \\ \text { Class }\end{array}$ | $\begin{array}{c}\text { Unit Cost }\end{array}$ | $\begin{array}{c}\text { Total Cost Per } \\ \text { Class of 12-16 } \\ \text { Students }\end{array}$ | $\begin{array}{c}\text { Number of Classes } \\ \text { Per School }\end{array}$ | $\begin{array}{c}\text { Total Cost Per } \\ \text { School }\end{array}$ |
| :---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |
|  |  |  |  |  |
| 6 | $\$$ | 80 | $\$$ | 480 |$)$


| \# of Units <br> Needed Per <br> Class | Unit Cost | Total Cost Per <br> Class of 12-16 <br> Students | Number of Classes <br> Per School | Total Cost Per <br> School |
| :---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |
|  |  |  |  |  |
| 16 | $\$$ | 20 | $\$$ | 320 |
|  |  | $\$$ |  |  |



| $\begin{array}{l}\text { Total Infrastructure Cost for } \\ \text { Outdoor Classrooms }\end{array}$ |  |  |
| :--- | :--- | :--- |

n-outside
environmental-literacy/home

000000For more information, please visit our website: https://bit.ly/COVID-OutdoorLearning

## For more information, please contact:

Sharon Danks, CEO, Green Schoolyards America -- sharon@greenschoolyards.org
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## Potential Sources for the Items Listed in this Chart

Note: The links below are examples of the types of equipment and infrastructure that could be useful for outdoor learning. The vendors and items shown are not meant as endorsements of these particular providers or products. They are simply provided to illustrate each idea. Please select the vendors and products that are right for your own school and context.
https://www.amazon.com/dp/B074C51R3P/ref=cm sw em r mt dp U 3V.4Eb8RJ1GVW
https://www.amazon.com/dp/B003399128/ref=cm_sw_em_r_mt_dp_U_2.4EbSK63Q1S
https://www.rei.com/product/847189/rei-co-op-camp-chair-kids
https://www.dickssportinggoods.com/p/gci-outdoor-sunshade-eazy-chair-17gciusnshdzychrxodr/17gciusnshdzychrxodr

Generally available from local arborists who specialize in large scale tree removal, or local park maintenance departments
Can be produced by local contractors; cost is generally around $\$ 100 /$ linear ft
Available from local farm supply companies; ask for "straw" not "hay" to avoid seeds
https://www.uline.com/Grp 349/Outdoor-Furniture-and-Equipment
https://www.thebenchfactory.com/northgate-park-bench
https://www.amazon.com/dp/B00556W6UQ/ref=cm sw em r mt dp U 2wu6Eb26C6W9X

## Links to Examples of Each Item

https://www.thegazebostore.com/commercial-tents/20-x-20-commercial-frame-party-tent-see-through.html https://www.thegazebostore.com/commercial-tents/20-x-30-commercial-frame-party-tent.html https://www.thegazebostore.com/commercial-tents/20-x-40-commercial-frame-party-tent.html
https://www.wayfair.com/outdoor/pdp/sol-72-outdoor-pakswith-16-w-x-11-d-aluminum-pergola-with-canopy-w001025655.html https://www.wayfair.com/outdoor/pdp/outdoor-living-today-breeze-12-ft-w-x-16-ft-d-solid-wood-pergola-xal1075.html

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https://www.wayfair.com/outdoor/pdp/shelterlogic-monarc-9-ft-x-16-ft-canopy-shg1614.html
https://www.wayfair.com/outdoor/pdp/king-canopy-universal-105-ft-x-27-ft-canopy-vy1326.html
https://www.garage-organization.com/Product/Arrow-Sheds-CPHC101507.aspx?f=gb\&gclid=EAlaIQobChMIj-ffOP2C6gIVDz6tBh1PCgcVEAQYAiABEgKHm D B
https://www.carportcentral.com/product-category/carports ; https://www.carportcentral.com/product-category/carports/vertical-roof-style https://www.carport.com/
https://www.amazon.com/dp/B07M5GKSF5/ref=cm sw em r mt dp U YvW5EbGK6N743
https://www.yurts.com/standard-custom-features/
https://www.wayfair.com/outdoor/pdp/colourtree-16-x-20-rectangle-shade-sail-cuor3043.html?piid=50012740
https://www.wayfair.com/outdoor/pdp/colourtree-28-triangle-shade-sail-cuor2829.html
https://www.wayfair.com/outdoor/pdp/outsunny-10-ft-w-x-8-ft-d-fabric-retractable-standard-patio-awning-otsu1288.html?piid=21993076
https://www.wayfair.com/outdoor/pdp/freeport-park-isom-11-market-umbrella-w000985471.html?piid=1429623790
https://www.wayfair.com/outdoor/sb0/patio-umbrella-stands-bases-c434741.html
$\square$
Links to Examples of Each Item
https://www.amazon.com/dp/B077T5M4C4/ref=cm sw em r mt dp U uuu6Eb9F077PN

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See estimates from National Council for School Facilities
We are still researching these costs.

Using existing restrooms will not incur construction costs, so this line item is noted as $\$ 0$, but COVID-related cleaning costs will be incurred.
http://www.oaklandportapottycrew.com/portable-toilets-berkeley-ca.html

## Links to Examples of Each Item

https://www.ikea.com/us/en/p/bondholmen-table-outdoor-gray-stained-gray-10420562/
https://www.worthingtondirect.com/dry-erase-boards/dura-rite-dry-erase-board-w-abc-trim-by-best-rite.htm
https://www.amazon.com/dp/B000J09OLM/ref=cm sw em r mt dp U Z-u6EbWKVF2YJ
https://www.amazon.com/dp/B06XWV9CCO/ref=cm sw em r mt dp U a3V6EbAG9H3X6
https://www.acehardware.com/departments/storage-and-organization/outdoor-storage/sheds-and-garages/7367105?gclid=EAlalQobChMI-cj_36qH6gIVxz21
https://www.reallygoodstuff.com/double-sided-dry-erase-clipboard/p/164859/?gclid=EAlalQobChMloPGOn6yH6glVviCtBhOZeABIEAQYEiABEgKx9vD BwE

# Links to Examples of Each Item 

```
https://www.agrisupply.com/galvanized-stock-tank/p/14729/
https://www.lowes.com/pd/Real-Wood-Products-25-5-in-W-x-17-5-in-H-Rustic-Weathered-Oak-Wood-Barrel/1000041637
https://www.lowes.com/pd/Garden-Treasures-20-in-W-x-16-75-in-H-Black-Smooth-Plastic-Planter/3880961
https://eartheasy.com/premium-drinking-water-safe-garden-hose/
varies, purchase from a local plant store
varies, purchase from a local garden supply store
```

```
https://www.amazon.com/dp/B077T5M4C4/ref=cm sw em r mt dp U uuu6Eb9F077PN
https://www.amazon.com/dp/B002LMJO5M/ref=cm sw em r mt dp U Cdv6EbCKMBDOB
https://www.reallygoodstuff.com/double-sided-dry-erase-clipboard/p/164859/?gclid=EAlalQobChMloPGOn6yH6glVviCtBhOZeABIEAQYEiABEgKx9vD BwE
https://www.amazon.com/dp/B002VL5IJO/ref=cm sw em r mt dp U Wqv6EbSFV4XW7
https://www.amazon.com/dp/B086R5CHVY/ref=cm sw em r mt dp U cnv6EbNJ2W7ZW
```

https://www.amazon.com/dp/B01GJSKY98/ref=cm sw em r mt dp U 4jv6EbA9T8DFF
https://www.amazon.com/dp/BO7ZNTGTRJ/ref=cm_sw_em_r_mt_dp_U_Igv6EbP2RHXHV
https://www.amazon.com/dp/B002LMJO5M/ref=cm sw em r mt dp U Cdv6EbCKMBDOB
https://www.worthingtondirect.com/dry-erase-boards/dura-rite-dry-erase-board-w-abc-trim-by-best-rite.htm
https://www.amazon.com/dp/B000J09OLM/ref=cm_sw_em_r_mt_dp_U_Z-u6EbWKVF2YJ
https://www.uline.com/BL 6704/Uline-First-Aid-Kits
https://www.amazon.com/dp/B074C51R3P/ref=cm_sw_em_r_mt_dp_U_3V.4Eb8RJ1GVW
https://www.amazon.com/dp/B003399128/ref=cm sw em r mt dp U x2.4EbSK63Q1S
https://www.rei.com/product/847189/rei-co-op-camp-chair-kids
https://www.dickssportinggoods.com/p/gci-outdoor-sunshade-eazy-chair-17gciusnshdzychrxodr/17gciusnshdzychrxodr

