

OUTDOOR CLASSROOM TOOLKIT



MISSISSIPPI STATE UNIVERSITY™
FRED CARL, JR. SMALL TOWN CENTER

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This **Outdoor Classroom Toolkit** is geared towards communities that want to provide an outdoor learning space for school-aged children, taking into consideration teachers' and students' needs and ease of construction. This is designed for both skilled and unskilled volunteers and provides a free to create a functional, attractive, and creative Outdoor Classroom.



What is an Outdoor Classroom?

- An Outdoor Classroom is a space for students to interact with the natural world through play-based, multi-sensory activities.
- A well-designed Outdoor Classroom is nicely integrated into the school community and suitable for any subject matter.
- While playgrounds are usually meant for gross motor play (running, jumping, etc.), an Outdoor Classroom is meant to be used as a classroom and takes learning outdoors.





Benefits of an Outdoor Classroom

- Outdoor air quality is typically better than indoor air quality.
- Being outdoors provides more space to social distance during virus pandemics, such as COVID-19.
- Being outdoors provides opportunities for more activities, such as messy art projects or loud group discussions, that may not be desirable indoors.
- Studies show that children who spend more time outdoors make more friends, have a more active imagination, have a lower risk of obesity, have a lower risk of near-sightedness, have a better chance at mental well-being and high self-esteem, have a better attitude towards learning, and are generally happier.



Social Distancing



Fun Projects



Happy Kids



Process



01

Engage the Community

Pitch your idea to the teachers, students, and principal of the school and the superintendent of the district where you want to provide the Outdoor Classroom. Get parents and students excited project!

pg.6



02

Secure Funding

Seek out grants and donations that can provide funding for your project. Consider grants related to COVID-19, health and fitness, arts and education, and children's mental well-being.

pg.7



03

Gather a Planning Team

Make sure your team includes teachers and staff of the school, designers, community and children's advocates, and volunteers.

pg.8



04

Choose Site

Select one or two spots on the school's campus for your Outdoor Classroom. Consider adjacency to the indoor class rooms, low noise levels, access to shade trees, desirable ground conditions, and surrounding activities throughout the day.

pg.9





Process



05

Get Necessary Permissions

Once you have your general plan and location for your Outdoor Classroom, make sure to get the go-ahead from the principal, superintendent, and teachers.

pg.10



06

Design Your Outdoor Classroom

Work with your design team to utilize the site to provide an ideal environment for outdoor learning. Choose materials, consider shade, and prioritize comfort and safety in your design.

pg.11-21



07

Install Your Outdoor Classroom

Your Outdoor Classroom can be installed by design professionals, volunteers, contractors, or local organizations depending on the level of construction required. Consider maintenance for permanent installations.

pg.22



08

Teach and Learn!

Demonstrate all the possible functions of your Outdoor Classroom to the teachers and students. Consider an open house or other public event to get the users excited about teaching and learning in the space.

pg.23



Engage the Community

- Meet with the teacher(s) of the subject(s) that will be taught in your Outdoor Classroom to **determine specific needs and wishes**.
- Get approval for the site's location, project schedule, and other specifics of your outdoor classroom from the **principal of the school and the superintendent of the district**. Discuss any potential funding opportunities.
- Consider including **student artwork or students' ideas** within the design of your Outdoor Classroom. Teachers can provide images from previous assignments or you can give a specific assignment to the teachers to administer to the students to tailor to your Outdoor Classroom (e.g. – create a pattern using specific colors that match the design of your Outdoor Classroom).



Community Engagement



Student Artwork



Secure Funding

- Ask the superintendent and principal for **potential funding sources**.
- Consider **fundraising** within the community.
- Research grant opportunities geared toward **education, art, fitness, sciences, and mental health**. Also look for grants specific to **placemaking**.
- Where can you start looking for funding? Consider opportunities at the **local, regional, state, and federal** levels. Examples at each level are listed in the chart on the right.
- Keep in mind grants may not be specifically for “outdoor classrooms,” but, if you are creative, you can **tailor your request to fund much of the project**.
- Reach out to others that have done an outdoor classroom project and **ask where they received their funding**.
- **School Outfitters** has more tips and resources here: <https://www.schooloutfitters.com/article/outdoor-classroom-and-garden-grant-resources>
- **Grants.gov** is one-stop grant opportunity information website for federal funding.



Grant Opportunities - Where to Start



LOCAL

- Community Partners (i.e. local hospital)
- Local Businesses
- Community Organizations and Civic Clubs
- Local Foundations



REGIONAL

- Regional Foundations (i.e. CREATE Foundation)
- National Heritage Areas (Mississippi National Delta Heritage Area)



STATE

- M.A.C. (Mississippi Arts Commission)
- MDEd (Mississippi Department of Education)
- Phil Hardin Foundation

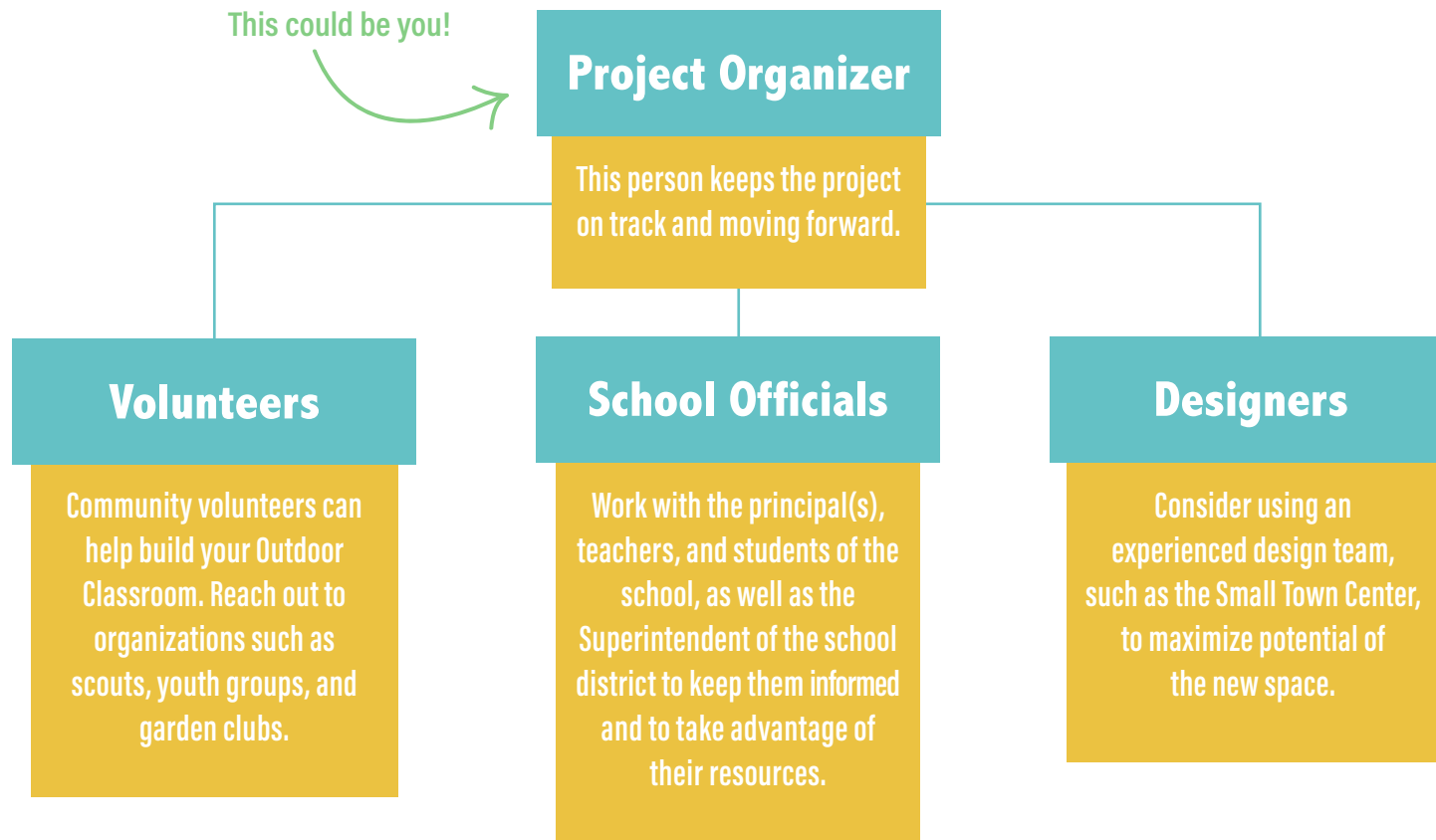


FEDERAL

- NEA (National Endowment for the Arts)
- Kellogg Foundation
- Lowe's Charitable and Educational Foundation



Gather a Planning Team

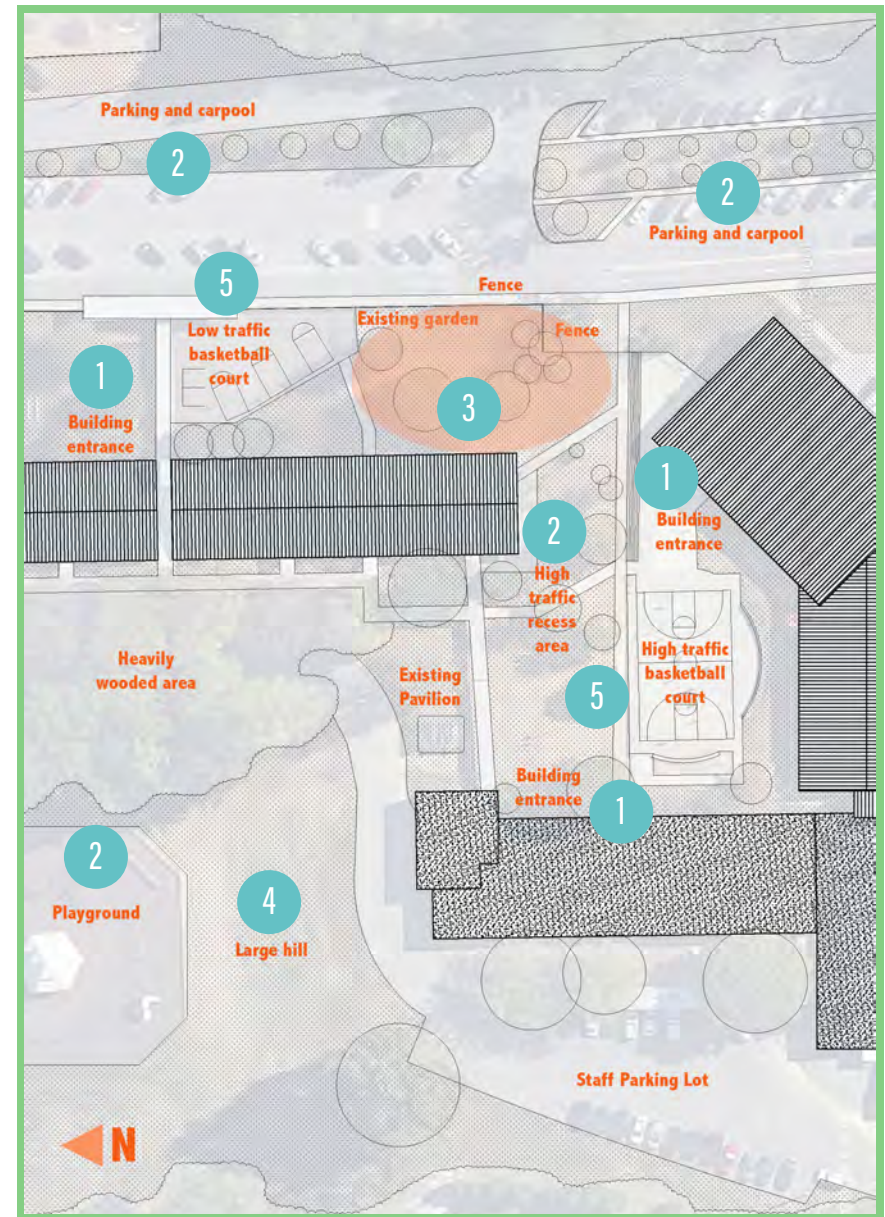




Choose a Site

Consider the Following:

- 1 **Adjacency to indoor classrooms** – How far will the kids and teacher(s) have to walk to enjoy the Outdoor Classroom within a typical school period?
- 2 **Noise Level** – Are the surrounding areas quiet or are they too polluted by noise from a highway, playground, parking lot, etc.?
- 3 **Shade** – Are there good shade trees on the school's campus to take advantage of for heat and sun protection?
- 4 **Ground Conditions** – Is the ground on the site you are considering in a valley where water pools after a rain? Is the slope of the ground desirable for a teaching environment?
- 5 **Surrounding Activities** – Are there activities in adjacent areas at certain times of day that may distract students using the Outdoor Classroom?



Henderson Ward Elementary School Case Study Site Plan
Shaded area highlights ideal location for an Outdoor Classroom.



Get Necessary Permissions

- Once a site and general plan of the Outdoor Classroom is done, present to the **Superintendent of the school district for the go-ahead**. For many districts, this is an informal process and can be verbally approved the same day.
- Make sure your goals and the **principal's goals for the school campus** align and there are no red flags in your plan.
- Verify logistical elements with the end users of your Outdoor Classroom. The **teacher(s)** can provide information on the **number of students** at any given time, the **subjects being taught**, and **how the space will be used**.
- If a grant is being used to fund the project, familiarize yourself with the **requirements of the grant** to make sure all rules are being followed (e.g. - some grants may not allow permanent fixtures be included in your Outdoor Classroom)

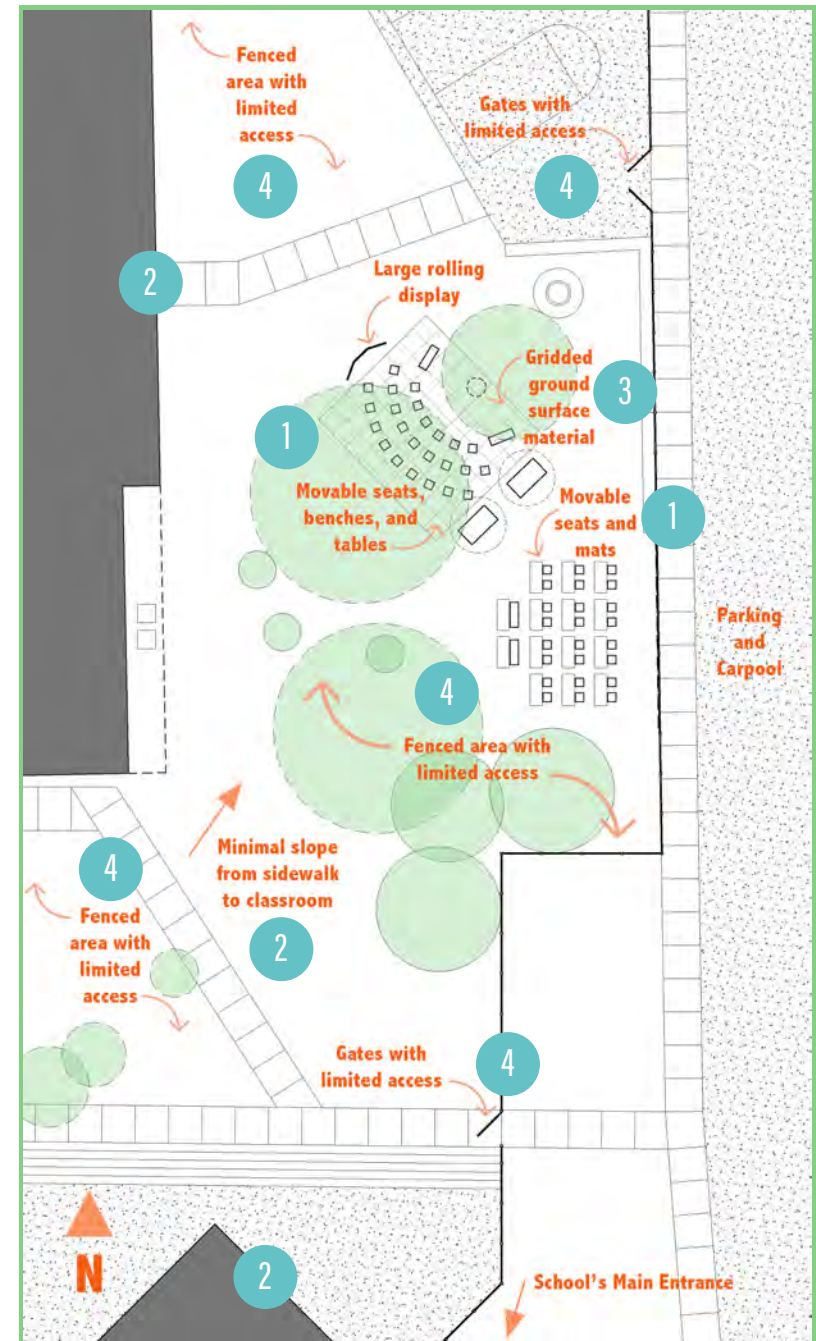




Design Your Outdoor Classroom

Design Goals

- 1 Flexibility** - Your design should be able to be easily rearranged, or even removed, if necessary. Consider elements that are flexible and lightweight, or on wheels if too heavy to lift.
- 2 Accessibility** - Your Outdoor Classroom should be accessible by all teachers and students. Install ramps where needed or keep less than 1/4" height difference between new ground surface and existing ground surface.
- 3 Health** - Furniture should be able to be arranged to allow for social distancing. Consider using a measured grid pattern or tiles on the ground to ensure safe spacing when arranging elements.
- 4 Safety** - Students' safety from passersby, cars, and other dangers should be top priority. Consider this when designing your Outdoor Classroom and plan accordingly.



Henderson Ward Elementary School Case Study
Outdoor Classroom Plan



Design Your Outdoor Classroom

Design Elements

- | | | | |
|---|----------------|---|-----------------------|
| A | Ground Surface | D | Shade |
| B | Seating | E | Storage |
| C | Work Surface | F | Specialized Equipment |
| | | G | Accessories |





Ground Surface

Tips!

- The ground surface of your Outdoor Classroom can be **existing grass or pavement**, a **laid surface**, such as rigid tiles or decking, a **rolled surface**, such as turf or rubber mats, or a **sifted surface**, such as mulch or crushed limestone.
- Abide by **ADA standards** to make your Outdoor Classroom accessible to all students and teachers. For information and standards visit the website, **ADA.gov**.
- Before placing any new materials, **prep the ground surface** by removing debris, weeds, anthills, pinecones, leaves, etc. The **cleaner** a site is, the **easier** the ground surface will be to install.
- A layer of **landscape fabric** under rigid tiles or a **layer of mulch** under a pliable material can help keep weeds at bay.
- Rigid tiles work best on **flat ground**, while pliable mats and tiles are ideal for **sloped or inconsistent ground conditions**.





Ground Surface

Tips! Continued

- Perforated tiles, whether rigid or pliable, can help with water drainage.
- A new slab of concrete at \$6-\$8 per square foot or a wooden deck surface at \$20-\$60 per square foot may be worth the higher upfront costs if your Outdoor Classroom is planned as a permanent fixture.



Laid Surface - Rigid Tiles

\$4-\$8 per square foot



Rolled Surface - Rubber Tiles or Rolls

\$2-\$4 per square foot



Sifted Surface - Mulch or Crushed Limestone

\$1-\$2 per square foot



Seating

Tips!

- When choosing the right seating for your Outdoor Classroom, consider the following:
 - how the seats will be stored and if stacking is desirable
 - how easy the seats are to move around, especially when social distancing is needed
 - how durable the seats are and if kids will be able to stand and jump on them without them falling apart.
- Consider companies in your community that may be willing to donate large logs for benches or tree stumps as seats. Your city and its public works department may be able to provide stumps from a local tree at no cost to you.
- The ground itself can be a seat in the right application. A yoga mat, towel, or blanket can provide a barrier between the ground and the student.
- The need for seating gives you an opportunity to get creative. Anything can be built or reimagined as a seat if it is durable and is within the optimal height range of 12"-19."
- Sometimes seating can serve a dual purpose and become storage or a work surface. One example, an "art horse" or "drawing horse," is featured in the Work Surfaces section of this toolkit on page 17.
- Companies such as School Outfitters specialize in outdoor classroom furniture. Although usually a more costly option, they feature modular systems that can be customized to suit your needs.





Seating



Natural Objects - Wood Stumps or Large Rocks

| Potentially Donated Items



Yoga Mats

| \$10-\$20



Stacking Stools

| \$10-\$25



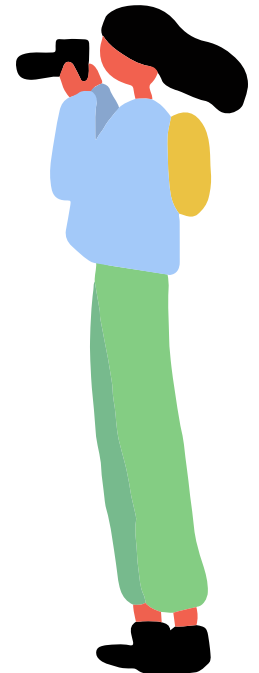
Chairs

| \$25-\$225



Custom Seating

| Cost varies





Work Surface

Tips!

- Consider the types of activities will take place in your Outdoor Classroom: **group work vs. individual work**; **standing vs. sitting**; and the need for **social distancing**.
- A **large table** can serve a **group of students** sitting and an even larger group standing and can be beneficial when working on group projects or watching teacher demonstrations.
- **Individual work surfaces**, such as height-appropriate side tables or drawing horses, lend themselves to **flexibility and social distancing**, and are best for **independent work situations**.
- **Mobile work surfaces**, such as sturdy books and **clipboards**, can be carried by the students to their seat and be used in lieu of a table.
- In the right application, such as an art class, a **vertical work surface** can be used for activities such as drawing or painting. An example of a **hanging art easel and display** can be found in the Specialized Equipment section of this toolkit on page 29.
- **Seat and desk combination furniture** is available, and, although more expensive than most other work surface options, could be desirable in the right application.





Work Surface



Clipboards

| \$1-\$20



Drawing Horses

| \$20-\$200



Side Tables

| \$30-\$150



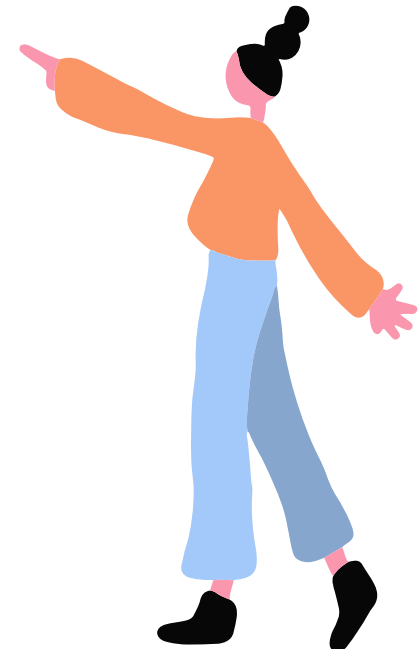
Large Tables

| \$100-\$350



Seat Desk Combo

| \$500-\$2000+





Shade

Tips!

- In the **southern US**, shade is a top priority if students will spend anytime outside during the warmer months of the school year.
- **Large canopy trees** are the best resource for an Outdoor Classroom because they offer shade when the weather is hot and drop their leaves in winter allowing sun through when the weather is cool.
- If you are not lucky enough to have good shade trees on your site, or you need additional shade, consider **umbrellas or shade sails** for your Outdoor Classroom.



Shade Trees

| Free!



Umbrellas

| \$50-\$250+



Shade Sails

| \$30-\$150+ structure to support



Storage

Tips!

- Consider where items will be stored that are not to be left on the site, such as **supplies, mats, and other tools.**
- Your school's campus may have a **secure outdoor area** that the users can claim as storage, or you may purchase a **storage shed or bench** that can be locked.
- Getting supplies from either the classroom or the secured outdoor area may prove challenging unless you invest in a **rolling cart** to transport materials back and forth.



TTS Resources Storage Shed, \$709



Mobile Storage Cart

| \$75-\$150



Storage Bench

| \$100-\$300



Storage Shed

| \$300-\$600+



Specialized Equipment

Tips!

- Items may need to be purchased to suit the specific needs of your Outdoor Classroom. For example, an art classroom could benefit from a **handwashing station**, while a math class could use a large **dry erase board** for teacher instruction.
- Think of the subject(s) that will be covered by the teachers in your Outdoor Classroom and consider installing **specialized equipment** that will benefit instruction.



**Dry Erase Board - Tabletop
Convertible Dry Erase**

| \$50-\$125



**Handwashing Station - Plastic
Sink & Surface Hose Connection**

| \$75-\$150



**Handwashing Station - Stainless
Steel Sink Hose Connection**

| \$500-\$2000+



Rolling Dry Erase Board

| \$250-\$500+



Accessories

Tips!

- Consider accessories that establish an identity for your Outdoor Classroom, that allow students' work to be displayed, and that serve a dual purpose as aesthetic, functional elements.
- Refer to the appendix of this toolkit for instructions on how to make Hanging Easels and a Rolling Art Display.



Signage

Price varies, sign shown \$40



Rolling Art Display

See Appendix for Project Instructions



Hanging Easels

See Appendix for Project Instructions



Laminated Student Artwork

\$0.75-\$2.50 for laminated sheet



Install Your Outdoor Classroom

- A **Checklist** will make sure you do not miss any steps.
- A **Budget** will help you keep track of costs as well as create a record for grants and any future Outdoor Classroom projects.
- A **Schedule** will create a plan and keep things moving along.
- See **Appendix** for templates of items above.



**Henderson Ward Stewart
Elementary Case Study - Before**

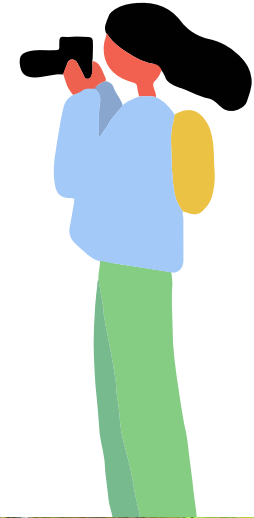


**After - Henderson Ward Stewart
Elementary Outdoor Classroom**



Teach and Learn!

- Consider having a meeting with the end users to **demonstrate the potential uses** of your Outdoor Classroom.
- **Promote your Outdoor Classroom** to get parents, students, and teachers excited about taking the classroom outdoors.
- A school's "Open House" at the beginning of the school year is an opportune time to **show off the new Outdoor Classroom** and to answer any questions parents and students may have.
- Consider creating a **sign-up sheet** for teachers to use to schedule users of the Outdoor Classroom.



Images taken at Henderson Ward Stewart Elementary Open House

APPENDIX



OUTDOOR CLASSROOM CHECKLIST

- ☐ **ENGAGE THE COMMUNITY**
 - ☐ PITCH IDEA TO TEACHERS, PRINCIPAL, AND SUPERINTENDENT OF SCHOOL DISTRICT
 - ☐ GET PARENTS AND STUDENTS EXCITED
- ☐ **SECURE FUNDING**
 - ☐ SEEK OUT GRANTS AND DONATIONS
 - ☐ CONSIDER FUNDRAISING
- ☐ **GATHER YOUR PLANNING TEAM**
 - ☐ TEACHERS
 - ☐ DESIGNERS
 - ☐ SCHOOL STAFF
 - ☐ PARENTS
 - ☐ COMMUNITY ADVOCATES
 - ☐ COMMUNITY VOLUNTEERS
- ☐ **CHOOSE SITE**
 - ☐ CLOSE TO INDOOR CLASSROOMS
 - ☐ LOW NOISE
 - ☐ ACCESS TO SHADE
 - ☐ DESIRABLE GROUND CONDITIONS
- ☐ **GET NECESSARY PERMISSIONS**
 - ☐ GET GO-AHEAD FROM SUPERINTENDENT
 - ☐ WORK WITH PRINCIPAL AND TEACHERS TO ENSURE YOU HAVE THE SAME GOALS
- ☐ **DESIGN YOUR OUTDOOR CLASSROOM**
 - ☐ EMPLOY PROFESSIONALS
 - ☐ FLEXIBLE? SAFE? ACCESSIBLE? SECURE?
 - ☐ CHOOSE DESIGN ELEMENTS
- ☐ **INSTALL YOUR OUTDOOR CLASSROOM**
 - ☐ IMPLEMENTATION PLAN
 - ☐ SCHEDULE
 - ☐ BUDGET
- ☐ **TEACH AND LEARN!**
 - ☐ DEMONSTRATE FUNCTIONS TO USERS
 - ☐ PLAN TO PRESENT AT OPEN HOUSE
 - ☐ PROMOTE ON SOCIAL MEDIA AND LOCAL NEWS
- ☐ **ENJOY YOUR STREATERY!**

Outdoor Classroom

Project Budget:

Project Info

Budget Summary

Project Lead:
Start Date:

Budget	Actual	Under/Over
\$	\$	\$

	Labor		Materials		Flat Fee Costs			Budget	Actual	Under(Over)
	Hrs	Rate	Units	\$/Unit	Material	Travel	Other			
Professional Services								\$	\$	\$
Design										
Construction										
Consultants										
Consultant 1:										
Consultant 2:										
Consultant 3:										
Design Elements (See "Design Your Outdoor Classroom" section of Toolkit)								\$	\$	\$
Built Ground Surface										
Existing to be Prepped:										
Laid Surface:										
Rolled Surface:										
Sifted Surface:										
Seating										
Natural Objects:										
Purchased:										
Custom:										
Work Surface										
Individual Tables or Drawing Horses:										
Large Tables										
Shade										
Umbrellas:										
Shade Sails:										
Storage										
Mobile Storage:										
Storage Bench:										
Storage Shed:										
Specialized Equipment										
Equipment Type 1:										
Equipment Type 2:										
Equipment Type 3:										
Accessories										
Accessory Type 1:										
Accessory Type 2:										

Outdoor Classroom

Project Schedule

Start Week

Week	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Week Starting Date																					Notes
Engage Community																					1-2 Weeks
Secure Funding																					2-4 Weeks+
Gather Your Planning Team																					2-3 Weeks
Choose Site																					1-2 Weeks
Get Necessary Permissions																					2-4 Weeks
Design Your Outdoor Classroom																					3-8 Weeks
Build Your Outdoor Classroom																					3-12 Weeks
Promote Your Outdoor Classroom																					Ongoing

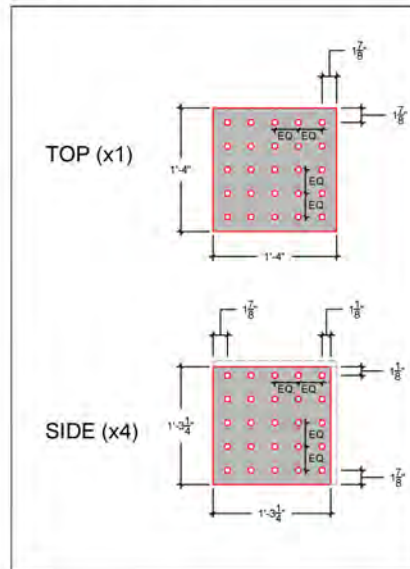
SITSY INSTRUCTIONS

Custom Seating

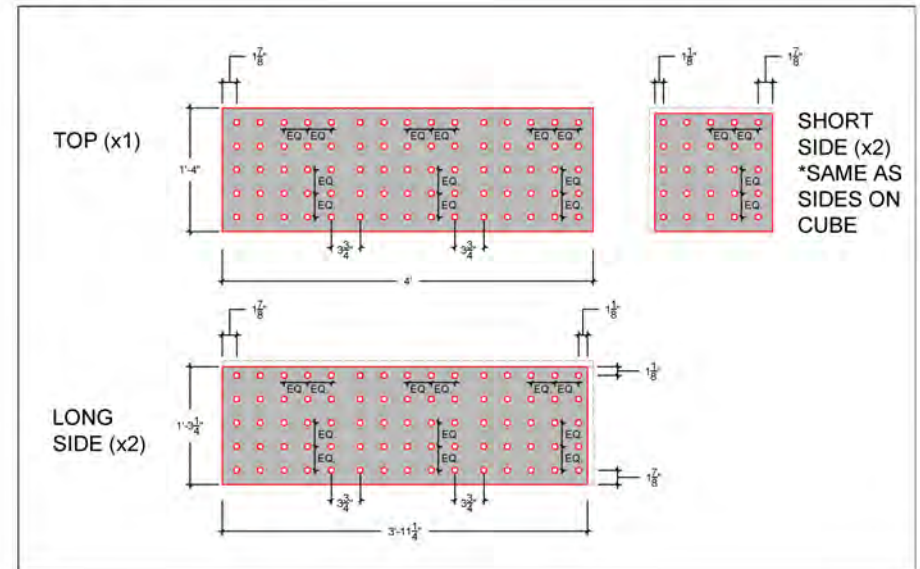
1. Cut $\frac{3}{4}$ " pressure treated plywood or desired material to size. If using a material that is not pressure treated, make sure to finish your seats with exterior grade protectants.
2. Drill holes or cut triangles as shown, or create your own pattern using cutouts.
3. Assemble using a nail gun or screws as shown in the assembly drawings.
4. If desired, route edges of seats to eliminate sharp edges and corners once seats are assembled.
5. Sand thoroughly and prep for paint.
6. Paint your seats with exterior grade paint in colors to fit your Outdoor Classroom theme. Consider painting the inside and edges a different color than the outside for added interest.
7. A polyurethane coat over the paint adds an extra layer of protection from the elements and makes Sitsy more durable for long-term use.



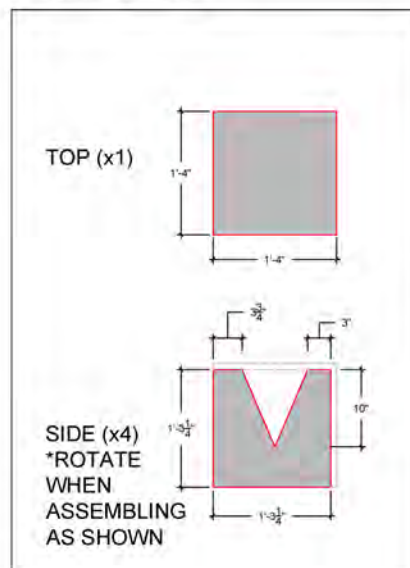
CUBE OPTION 1



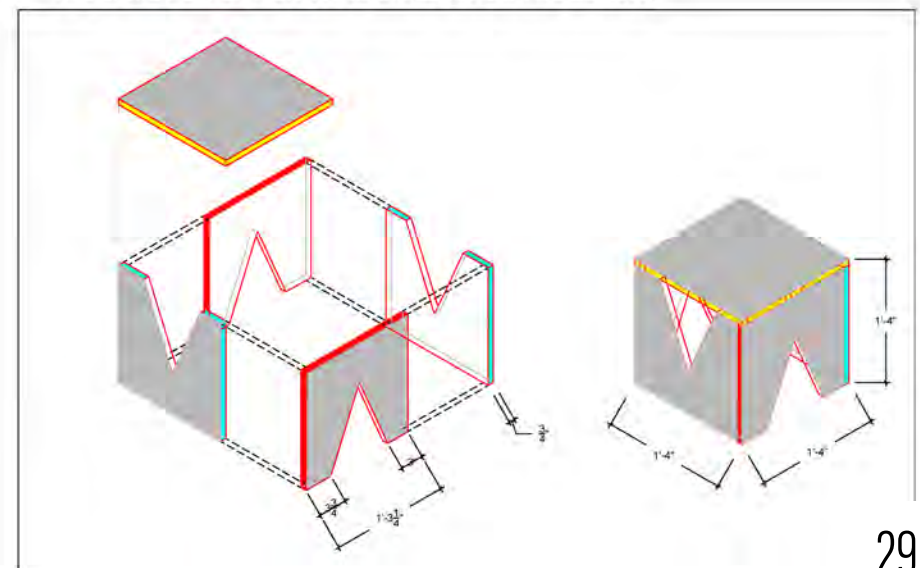
BENCH



CUBE OPTION 2



CUBE ASSEMBLY (OPTION 2 SHOWN HERE, ASSEMBLY THE SAME FOR OPTION 1 AND SIMILAR FOR THE BENCH)



HANGING EASELS INSTRUCTIONS

Custom Work and Display Surface

1. Identify a location for your hanging easels. An existing fence with horizontal pieces to hang from is ideal. A chain-link fence would also work.

2. Purchase pre-cut 2'-0" x 2'-0" pressure treated plywood squares from a home improvement store.

3. Sand thoroughly and prep for paint.

4. If desired, round or route edges of boards to eliminate sharp edges and corners.

5. Paint the easels with exterior grade paint in colors to fit your Outdoor Classroom theme. Consider painting the front side (the display/work side) a solid color so that the displayed items take stage. If the fence or hanging surface has openings, consider painting a design or alternating colors on the back side for added interest.

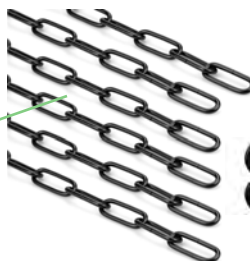
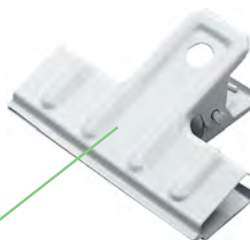
6. A polyurethane coat over the paint adds an extra layer of protection from the elements and makes the easels more durable for long-term use.

7. Attach one or two bulldog clips on the display side of the easel using small wood screws.

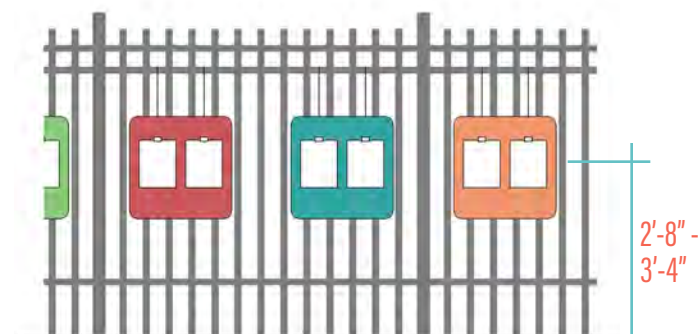
8. Attach two D-ring hangers on the back of the easel, about 1/3 of the height from the top of the board.

9. Ideal height for the center of an easel is between 2'-8" and 3'-4". Cut and measure lengths of heavy-duty plastic or metal chain, 2 for each easel. Measure from the D-ring up and around the horizontal fence member at desired height.

10. Hang easels by looping chain around a portion of the fence and securing with a matching S-hook. Use another S-hook to hang the chain from a D-ring. Repeat this twice for each board. Consider using chain that is a similar color to the fence so that the hardware is less visible than the easels.



BACK SIDE OF EASELS AS SEEN THROUGH FENCE



DISPLAY/WORK SIDE OF EASELS



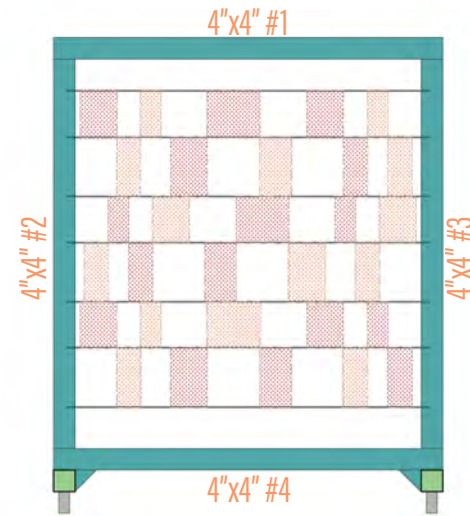
ROLLING WALL INSTRUCTIONS

Custom Rolling Display

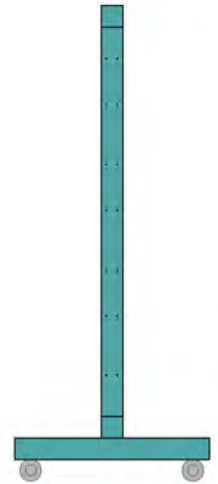
1. Purchase 5 pressure-treated 6'-0" 4"x4" posts, long wood screws, and heavy-duty casters at a home improvement store.
2. Take 4 of the posts and build a square frame as pictured on the front elevation. The top should sit on top of the side posts, and the side pieces should sit on top of the bottom post. Use a minimum of two long wood screws per connection to ensure stability.
3. Cut the remaining post in half, then cut 4" off each half. The two longer pieces will be the "feet" under the frame. Cut the 4" pieces to make triangle bracing between the frame and the feet (see front elevation).
4. Mount heavy duty wheels (5", 350-lb rated, swivel caster with brake) on each end of the "feet" as shown, 4 total.
5. Sand thoroughly and paint the rolling wall with exterior grade paint in colors to fit your Outdoor Classroom theme. Consider painting the interior of the frame and the ends of the feet in a contrasting color to add interest.
6. A polyurethane coat over the paint adds an extra layer of protection from the elements and makes the rolling wall more durable for long-term use.
7. Install an exterior deck cable railing system with hidden hardware within the frame. Follow the instructions of the system purchased for install as they vary. Consider adding two columns of cables within the frame so that both sides can be used simultaneously without disturbance. Consider the size of items that will be displayed when deciding on the spacing of rows. The design shown has spacing that correlates to the size of a standard 8.5 x 11 piece of paper in both landscape and portrait orientation.
8. Consider adding a permanent, artistic touch to the rolling wall. The design in the photos shown consists of varying widths and colors of outdoor tent fabric sewn onto the cables. This lets the rolling wall stand alone or as an interesting backdrop for student artwork. Be creative!



PLAN



FRONT ELEVATION



SIDE ELEVATION



THIS TOOLKIT WAS CREATED BY:



FRED CARL, JR.
SMALL TOWN CENTER

smalltowncenter.msstate.edu

SPONSORED IN PART BY:



arts.ms.gov