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## Developing and Piloting a Design Guide for Outdoor Classrooms in Utah

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# **DEVELOPING AND PILOTING A DESIGN GUIDE FOR OUTDOOR CLASSROOMS IN UTAH**

A Plan B Thesis Project in Fulfillment of a  
Master of Landscape Architecture and Environmental Planning

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2020-2022

*A Project Funded by the Utah Office of Outdoor Recreation*

## Preface

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Over the past five years, I have formally studied landscape architecture at Utah State University and have realized the inherent challenges present in teaching the complexities of landscape design to beginners. During that time, I have observed a variety of beginner-level designers grappling with the unique aspects of the landscape design process. In this project, I have tried to distill the most important parts of outdoor classroom design and simplify them to such a level that even children could successfully engage with the process. I'd like to share with you some of the most important things that I have learned in the process.

If I could suggest one main message for you to take away from this project, it would be that you can create an amazing outdoor classroom space, but you cannot do it alone. Some may feel intimidated by the prospect of designing an outdoor classroom. I submit that creating a successful outdoor classroom space is possible for any designer, grant applicant, teacher, or other interested party, if the project is founded on the principles of *teamwork*, *collaboration*, and *openness*. If you arrive at the end of an outdoor classroom design without having involved a team of friends and community members along the way, you will be burned out, and your design will not successfully meet the needs of its users. This is not a one-person job; it takes a village! Successful outdoor classrooms must be centered on *public participation*.

It is crucial that many people get their "fingerprints" on the outdoor classroom throughout the process, so that they will take ownership over the final product. Concerns such as cost, materials, maintenance, programming, and vandalism become non-issues when the community takes pride in the outdoor classroom space they've helped to create.

As I studied various facilities across the state, I was surprised to discover the consistent willingness of people to give freely of their time and talents for the cause of the outdoor classroom. As cliché as it may sound, they do it for the children. Even professionals have been willing to donate their time and expertise to these projects and provide guidance along the way. You may be similarly surprised by the community support that will flood into your project if you will but extend the opportunity and ask for help.

During the course of this thesis project, I had a number of rich learning experiences which have contributed to my understanding of the role of outdoor classrooms in landscape architecture and the principles of creating successful outdoor classroom spaces. I hope that as you look through the materials contained in this document, you will be similarly educated and find some benefit to whatever outdoor classroom projects with which you are involved. Remember, you can do it, but you cannot do it alone!

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## INTRODUCTION

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Studies nationwide suggest that the use of outdoor classrooms in education is beneficial to both students and teachers. In response, the Utah Office of Outdoor Recreation (OOR) established a grant to help fund the implementation of outdoor classrooms across the state of Utah. Interested schools and non-profit organizations may apply for this grant to fund outdoor classroom projects that will help transform their properties into outdoor learning environments.

One requirement for the application is the submission of a site plan for the outdoor classroom space. However, many interested applicants have little to no experience with landscape design and may struggle knowing how to create a successful outdoor classroom site plan for their grant application. Additionally, other design guides for outdoor classrooms are not specific to Utah and may contain irrelevant information that is burdensome or confusing to applicants. The goal of this research project is to enhance the quality of OOR Outdoor Classroom Grant proposals by creating a research-based design guide to help simplify the design process.

### The Utah Office of Outdoor Recreation

The Utah Office of Outdoor Recreation was created in 2013 as a response to the booming outdoor recreation industry in Utah and is the first organization of its kind in the United States (Utah Division of State History, 2019). In the spring of 2021, the OOR initiated a statewide grant with a budget of \$150,000.00 to encourage organizations in Utah to pursue the implementation of outdoor classrooms. Interested schoolteachers, administrators, and non-profit organizations could apply for awards of between \$500.00-\$10,000.00 per proposal. Though the funding was made available, the OOR expressed concern that teachers and administrators do not typically have access to design assistance that fits within such a small budget, or the design experience required to create an effective outdoor classroom site plan for their proposal(s). The OOR proposed that a design guide be created and distributed to help schoolteachers and administrators develop an outdoor classroom site plan that would make effective use of the grant funding.

## LITERATURE REVIEW

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### Benefits of the Outdoor Classroom

Although outdoor classrooms can be defined as learning environments anywhere outdoors, they are “especially efficient when located near a school, such as in the playground, a nearby park, forest, river, or pond” (Meighan & Rubenstein, 2018; National Research Council et al., 2010). Outdoor classrooms in this context will focus on spaces where permanent and/or semi-permanent outdoor infrastructure elements can be installed in locations including, but not limited to, schoolyards, parks, and other community spaces.

Studies have been conducted in schools nationwide to test the effects of using an outdoor classroom as a teaching/learning environment. In subjects such as language arts, math, science, social studies, thinking skills, interpersonal skills, and general education, test results have consistently favored students who learned in an outdoor classroom above students taught indoors (Lieberman and Hoody, 1998; Minero, 2018). Teachers who use outdoor classrooms also report increased enthusiasm and commitment, better relationships with students and colleagues, more diverse and innovative teaching strategies, and the ability to include interdisciplinary material into classes (Lieberman and Hoody, 1998; Meighan & Rubenstein, 2018).

Another study tested the focus and attention span of students who used an outdoor classroom, then returned to an indoor classroom for subsequent classes in their schedule. In this test, classes of students who utilized the outdoor classroom for part of the day showed greater levels of focus and attention than classes of students who remained indoors throughout the day. Results remained consistent over a period of 10 weeks (Kuo et al., 2018; Suttie, 2018). Outdoor classrooms can provide additional benefits, such as more effective teaching and learning, improved relationships between teachers and students, and a greater understanding and treatment of the environment among students (Funnell et al., 1997; Meighan & Rubenstein, 2018). While these studies provide a compelling argument for the benefit of outdoor classrooms, they offer little guidance with regards to the actual design of the classrooms. They assess the spaces as they are, but the focus of a designer is on what a space can become.

### A Review of Existing Design Guides

Several outdoor classroom design guides have been produced in other states throughout the nation. General principles of outdoor classroom design are well-documented and have a great deal of continuity between existing design guides. Variation is mostly due to the diverse types of outdoor classrooms. For instance, some guides are focused on teaching gardening, some on childcare spaces, some on nature-playgrounds, and others on grade school applications, etc. Because this project is intended to be a resource for all types of outdoor classrooms, emphasis was placed on researching the design processes utilized by each guide, rather than the various classroom type-specific design principles. A brief comparison of existing guides and their design processes provided insights into common trends and potential gaps in the literature.

		Design Process Elements																		TOTAL						
		Define a Vision + Goals	Establish a Team	Form Partnerships	Gather Precedent Ideas	Visit Existing Successful Sites	Brainstorm with Team	Include Student + Public Participation	Conduct a Needs Inventory	Create Curriculum Goals	List Program Elements	Conduct Site Inventory + Analysis	Sketch a Layout	Select a Site	Create a Bubble Diagram	Create a Concept Plan	Create a Schematic Plan	Prioritize + Phase Plan Areas	Create Construction Documents		Seek Volunteer + Professional Help	Fundraise	Construct Site	Maintain + Manage Site	Conduct Post Occupancy Evaluation	
Existing Design Guides	Books																									
	Gardens for Learning: California School Garden Network (2006)	1	1		1		1		1	1	1	1	1	1		1				1		1	1	1		16
	Natural Learning: Robin Moore & Herbert Wong (1997)		1		1		1		1							1									1	7
	Asphalt to Ecosystems: Shaaron Darko (2016)	1	1		1		1		1			1	1				1		1	1	1		1			13
	Cultivating Outdoor Classrooms: Eric Nelson (2015)	1	1		1		1		1			1	1	1			1		1		1		1			12
	Nature Play and Learning Spaces: Moore & Cooper (2014)	1	1	1	1		1	1	1			1	1			1	1	1	1	1	1		1	1	1	19
	How to Grow a School Garden: Andrea Becklin-Spencer & Rachel Pringle (2010)	1	1	1	1		1	1	1			1				1				1		1	1	1	1	15
Creating Outdoor Classrooms: Schoolyard Habitats and Gardens for the Southwest: Johnson et al. (2008)	1	1						1	1	1	1	1	1	1	1	1			1	1	1		1	1	17	
Online Resources	Growing the Outdoor Classroom: Albuquerque Public Schools 2nd Ed (2014)	1	1	1		1	1	1	1	1	1	1	1									1	1	1		14
	Developing an Outdoor Classroom to Provide Education Naturally: University of Tennessee Extension (2009)	1	1					1	1	1	1	1	1						1		1		1			11
	Getting Started: A Guide for Creating School Gardens as Outdoor Classrooms	1	1	1	1			1			1					1	1			1		1	1	1		13
	Building Outdoor Classrooms: A Guide for Successful Fundraising	1	1				1	1			1					1	1			1		1	1	1		13
	Nature Explore	1	1			1					1				1					1		1				7
TOTAL		11	12	4	7	4	8	10	5	8	8	10	3	8	2	3	9	5	3	10	9	7	8	3		

Figure A – Existing Design Guides vs. Design Process Elements Matrix

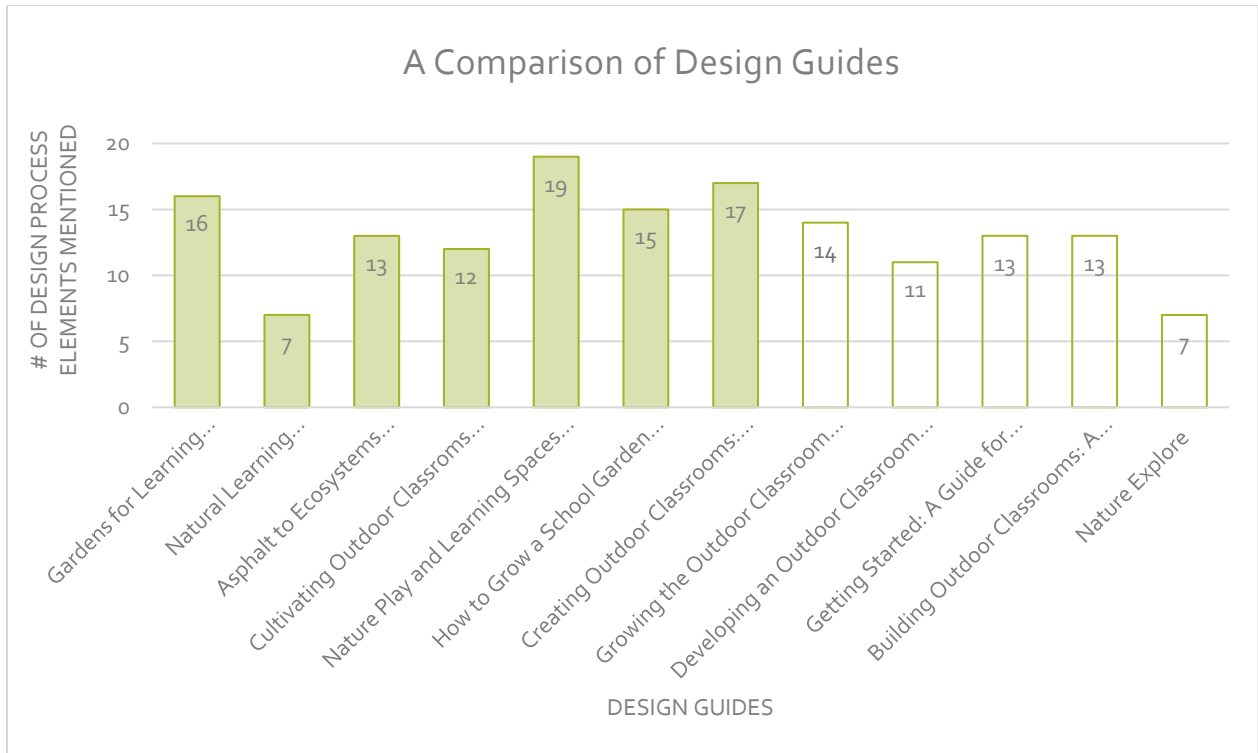


Figure B – A Comparison of Design Guides

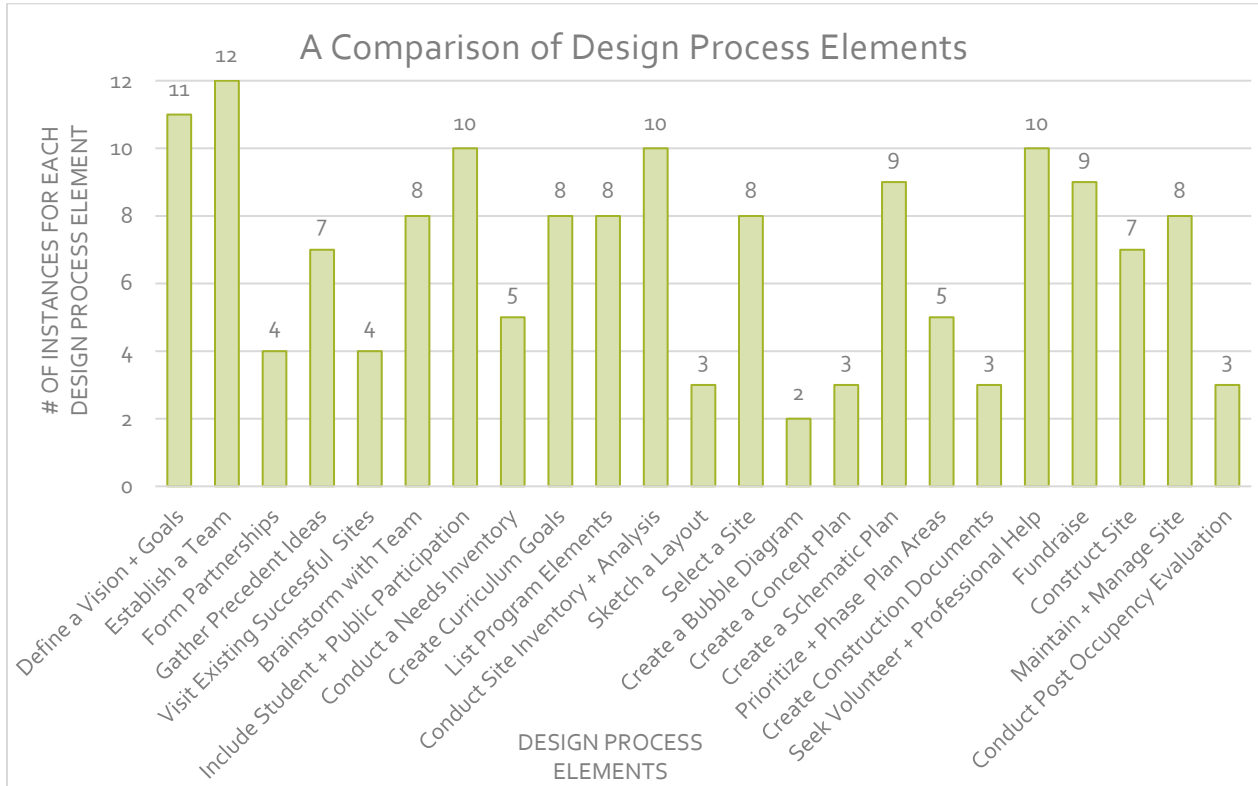


Figure C – A Comparison of Design Process Elements

### Structure of Analysis

Twelve existing design guides were selected for review, including seven books (California School Garden Network, 2006; Moore & Wong, 1997; Danks, 2010; Nelson, 2015; Moore, 2014; Bucklin-Sporer & Pringle, 2010; Johnson et al., 2008) and five online resources (Growing Gardens Team & Albuquerque Public School District, 2014; Kimbro, 2010; Center for Ecoliteracy & Barlow, 2009; Forests Ontario & TD Friends of the Environment Foundation, n.d.; Nature Explore, 2020), as shown in Figure B – A Comparison of Design Guides. While studying the design processes of each guide, 23 generalized elements of the various design processes were identified. Of all the design guides reviewed, Nature Play and Learning Spaces (Moore et al., 2014) had the most comprehensive design process, including 19 out of the 23 elements. It was followed closely by Creating Outdoor Classrooms (Johnson et al., 2008) which included 17 elements, and Gardens for Learning (California School Garden Network, 2006), which included 16 elements. Not surprisingly, the books seemed to be more comprehensive in comparison to the online resources.

### General Observations + Critiques

Of all the design process elements mentioned, the only element that was clearly emphasized in each guide was to establish a team, as shown in Figure C- A Comparison of Design Process Elements. There was also an emphasis on *setting goals, including student and public participation, conducting a site inventory/analysis, and seeking for volunteer and/or professional help*. Overall, there was great emphasis and direction on social, organizational, and observation-based elements. However, nearly all the design guides lacked direction for the creative design and drafting/visualization aspects of the design process. Note that some of the least mentioned process elements were *creating a bubble diagram, sketching a layout, and creating a concept plan*. Understandably, teachers and non-profit leaders are not typically trained to design and produce site plans, so many guides defer that responsibility to a professional or talented volunteer. This is one large gap in the existing resources for the design of outdoor classrooms, especially for those without access to outside help.

As mentioned, nearly all guides failed to explain the beginning stages of design visualization, but many included the element of *creating a schematic plan*. However, the visual examples provided didn't show a progression of design, but instead showed rough sketches or finalized schematic plans that were unrelated to each other. Indeed, creating a schematic plan is an important part of the process, but it may be confusing or discouraging for readers to see a schematic plan without knowing how to use the materials necessary to produce such a plan or even understanding the thought process behind the design.

There were some guides that included a more thorough description of the earlier steps in the process of design visualization, but these included few visual examples. Additionally, those guides recommended the use of unfamiliar drafting materials (e.g., an engineering scale, trace paper, drafting pens/pencils, etc.) but offered no explanation or examples of how to use them.

On a separate note, though nearly all guides recommended incorporating public participation into the design process, few gave examples of how to accomplish that, and only the book *Cultivating Outdoor Classrooms* (Nelson, 2015) provided a survey example as a resource. However, the provided survey consists of five separate sections, over 100 detailed questions, and no room for customized feedback, like a notes or comments section. A survey of this size and complexity is likely to discourage even the staunchest supporters of the outdoor classroom and may not produce desirable insights and ideas from the audience.



## Public Participation

Schools and community organizations around the nation have invested great amounts of time and money into outdoor learning environments. Design experts consistently recommend that public participation is a fundamental principle for creating successful outdoor learning environments (Danks, 2010; Moore & Cooper, 2014; Moore & Wong, 1997; Olds, 2001; Stine, 1996; Sobel, 2017; Nelson, 2015). However, engaging the community takes planning, time, and resources. Is it worth the additional effort? Olds (2001) states that “Because collaboration requires dialogue and consensus among people with varied agendas and expertise, it can be difficult, cumbersome, and time-consuming. But failure to institute a process with a diversified, representative approach has been **the single greatest factor** in creating facilities that do not support the needs of children, even where projects are well-funded. A good team always includes both childcare and design professionals, as well as management, building professionals, and representatives of regulatory agencies.”

From their experience creating outdoor learning environments, Moore and Wong (1997) reported that “Collectively, the community had knowledge that no outside expert could ever acquire independently. The best thing to do was to collaborate with the community in the development process. The ultimate aim of this process was educational, to help people learn how to control their own environment and design it to suit their own purposes.” Public participation seems to be a fundamental tool by which design is enhanced and people are educated—effectually becoming better stewards of their own land. However, Salama (2013) emphasizes that participants in the community engagement process help inform but do not replace the designer.

## Case Studies

Case studies are a widely accepted form of research for outdoor classrooms, and nearly every book or design guide includes them in varying degrees of detail. Francis (2001) suggests that one purpose for using case studies in landscape architecture is to provide design inspiration and precedent for replication. Such documented case studies for outdoor classrooms can be found in states all around the nation, though they are generally concentrated near the east and west coasts. Perhaps that is a result of the more temperate coastal climates or the greater concentrations of population along the coasts. As it would follow, few case studies can be found for outdoor classrooms anywhere in Utah or the Intermountain West. The Nature Explore organization has currently documented 18 of their certified outdoor classrooms in Utah with a brief overview of each project, but they don't include enough detail to educate designers or serve as precedent for replication, as would be desired from a case study.

## PROJECT OBJECTIVES

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The primary objectives for this project were to:

1. Create an outdoor classroom design guide specific to Utah that could help grant applicants create their own site plan.
2. Simplify the site design process for beginner-level designers without access to typical drafting materials.
3. Provide tools for including public participation in the design process.
4. Provide examples to inspire applicants and help them improve the quality of their designs.
5. Document a selection of case studies for existing outdoor classroom locations in Utah and examine the aspects that make them successful.
6. Implement a replicable methodology for improving the design guide in the future.

## PROCESS + METHODOLOGY

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### Process Overview

Prior to opening the 2021 spring grant funding cycle, the 2021 Utah Outdoor Classroom Design Guide was quickly produced as a pilot guide to walk applicants through the design process and give them an example of how to create a basic site plan for their application(s). The design process outlined in the 2021 design guide was simplified based on the landscape design process proposed by Booth & Hiss (1991). Although helpful for that first year of grant funding, the 2021 design guide was not thoroughly researched and had not been backed by practice, experience, or observation.

The framework for improving the design guide involved a variety of methods. First, applicants from the 2021 grant funding year were surveyed about their experience using the design guide. Second, outdoor classroom design guides from other areas of the nation were reviewed for recommended design processes and principles specific to outdoor classroom design. Third, a series of case studies were conducted on various existing outdoor classrooms in Utah. Fourth, a public engaged design process, based on recommendations from the literature, was explored with Greenwood Charter School in Ogden, UT. Finally, the findings from each of these methods were implemented into a refined design guide for future grant funding cycles.

Since this may be the first exposure to design for many of the applicants, the guide implements a hands-on experiential curriculum approach which allows applicants to learn by doing as they follow a step-by-step process customized for their grant application.

### Participant Feedback Survey + Review of Applications

During the 2021 grant funding cycle, the OOR received 36 statewide applications for the outdoor classroom grant, which reached a total funding request of \$312,982.00, over twice the total grant budget. A survey with a small prize as incentive was distributed to each applicant to gather information about their use and experience with the design guide.

Of the 36 applicants, 12 (33.3%) responded. Of the 12 respondents, 8 (66.7%) reported having used the provided design guide, and 4 (33.3%) reported not using the guide—either because they were not aware that the guide was available to them, or because another person designed their site plan for them. Those that used the design guide provided valuable feedback and criticism that was incorporated into the updated edition of the guide. Specific elements influenced by the participant feedback survey include:

- Printable worksheets

- Imagery depicting the design process, using the provided worksheets
- A simplification of drafting materials required for the design process (no software, trace paper, scale bar, or specialized pens and markers)
- Examples of other site plans and recommendations (provided through case studies)

## Outdoor Classroom Case Studies

### Selection Process

The purpose of conducting case studies for the outdoor classroom design guide was to “bring to light exemplary projects and concepts worthy of replication” (Francis, 2001) and to provide applicants with local, accessible, and relatable sources of inspiration for design. The potential case studies were organized geographically (Intermountain West) and by project type (those including an outdoor classroom(s)).

Aside from those listed in Nature Explore’s Certified Outdoor Classrooms library, there is no collection of documented outdoor classrooms for the state of Utah. To collect a breadth of case study options apart from that organization, an informal search for outdoor classroom spaces across the state was necessary. Over a period of three months, 42 outdoor classroom locations (including the 18 Nature Explore Classrooms in Utah) were identified by means of internet search, past personal experience, and word-of-mouth referral.

After collecting that initial sample of outdoor classrooms, each location was assessed and scored for accessibility to grant applicants based on three categories: city population, institution type, and online presence.

**City Population** – City population was based on data from the 2019 United States Census Bureau. Populations were separated into 5 categories and scored based on observed jumps in population as follows:

#### SCORE | POPULATION

0.0 = 0-49,999

0.5 = 50,000-79,999 (out of state locations were also given a score of 0.5)

1.0 = 80,000-99,999

1.5 = 100,000-149,999

2.0 = 150,000+

This category was given the most weight in the assessment because outdoor classrooms in highly populated areas are more geographically accessible for in-person visitation to a higher number of people.

**Institution Type** – Institutions were generalized into seven groups, based primarily on the role of the institution with an outdoor classroom facility. The categories were defined and scored based on their accessibility for visitation as follows:

#### SCORE | INSTITUTION TYPE

0.0 - Domestic Violence Shelters (Protected)

0.0 - Child Care Centers (Protected)

0.0 - Commercial Gardens (Costly)

0.5 - Preschools (Private, Potentially Accessible)

0.5 - Private Schools (Private, Potentially Accessible)

- 1.0 - Public Schools (Public)
- 1.0 - Community Spaces (Public)

**Online Content** – Each location was scored based on quantity and quality of online content recognizing their outdoor classroom facility as follows:

**SCORE | ONLINE CONTENT**

- 0.0 – No online content recognizing outdoor classroom at facility
- 0.5 – Some online content recognizing outdoor classroom at facility, but may lack quality
- 1.0 – Robust and high-quality online content recognizing outdoor classroom at facility

After each location was assessed and scored, the scores for all three categories were combined for an overall score of case study appropriateness. All 42 locations were then ranked based on their overall score. Due to the extra weight given to populated areas and the larger number of outdoor classroom locations in those areas, there were several highly ranked locations in the same cities. To diversify the geographical reach of the case studies, only one highly ranked outdoor classroom location per city was allowed to be selected for case study. The outdoor classroom facilities that were selected for case study are as follows:

**Case Study Locations**

- 4.0 – Wasatch Community Gardens’ Campus – Salt Lake City, UT (Ranked 1<sup>st</sup>)
- 3.5 – Conservation Garden Park – West Jordan, UT (Ranked 2<sup>nd</sup>)
- 3.0 – Tonaquint Nature Center\* – St George, UT (Ranked 8<sup>th</sup>)
- 2.5 – Stokes Nature Center – Logan, UT (Ranked 9<sup>th</sup>)
- 2.0 – Greenwood Charter School\*\* – Ogden, UT (Ranked 20<sup>th</sup>)

**Runner Up Locations**

- 2.5 – The Gardens on Spring Creek – Fort Collins, CO (Ranked 10<sup>th</sup>)
- 2.5 – Waterford School – Sandy, UT (Ranked 11<sup>th</sup>)
- 2.0 – The Riverwalk – Pueblo, CO (Ranked 13<sup>th</sup>)

*\*The Tonaquint Nature Center was ranked 8<sup>th</sup> alphabetically but tied in score with the Red Hills Desert Garden, so the two sites were evaluated for the quality of outdoor classroom examples on site. The Nature Center had more areas specifically designed for the function of an outdoor classroom, so it was selected for the study.*

*\*\*Four other locations that could have been selected for the study scored higher than Greenwood Charter School. However, Greenwood was selected due to a request for outdoor classroom design assistance from an interested teacher at the school. This presented an opportunity to test the design principle of public participation (recommended in the literature) in an applied context.*

RANK	Outdoor Classroom Facility	Location	City Population	Population Score	Institution Type	Type Score	Online Score	OVERALL SCORE
1st	Wasatch Community Gardens Campus	UT - Salt Lake City	197,756	2.0	Community Space	1.0	1.0	4.0
2nd	Conservation Garden Park	UT - West Jordan	114,138	1.5	Community Space	1.0	1.0	3.5
3rd	Escalante Elementary	UT - Salt Lake City	197,756	2.0	Public School	1.0	0.5	3.5
4th	Red Hills Desert Garden	UT - St George	84,499	1.0	Community Space	1.0	1.0	3.0
5th	Red Butte Gardens	UT - Salt Lake City	197,756	2.0	Commercial Gardens	0.0	1.0	3.0
6th	SLCC Eccles Early Childhood Lab	UT - Salt Lake City	197,756	2.0	Preschool	0.5	0.5	3.0
7th	SLCSE High School	UT - Salt Lake City	197,756	2.0	Private School	0.5	0.5	3.0
8th	Tonaquint Nature Center	UT - St George	84,500	1.0	Community Space	1.0	1.0	3.0
9th	Stokes Nature Center	UT - Logan	50,863	0.5	Community Space	1.0	1.0	2.5
10th	The Gardens on Spring Creek	CO - Fort Collins	NA	0.5	Community Space	1.0	1.0	2.5
11th	Waterford School	UT - Sandy	96,127	1.0	Private School	0.5	1.0	2.5
12th	Lesly's Friends Child Care	UT - Salt Lake City	197,756	2.0	Child Care	0.0	0.5	2.5
13th	The Riverwalk	CO - Pueblo	NA	0.5	Community Space	1.0	0.5	2.0
14th	CTE High School	UT - St George	84,500	1.0	Public School	1.0	0.0	2.0
15th	Desert Hills High School	UT - St George	84,500	1.0	Public School	1.0	0.0	2.0
16th	Sunrise Ridge Intermediate School	UT - St George	84,500	1.0	Public School	1.0	0.0	2.0
17th	ABC Great Beginnings-Redwood	UT - West Valley	136,009	1.5	Child Care	0.0	0.5	2.0
18th	ABC Great Beginnings-West Jordan	UT - West Jordan	114,138	1.5	Child Care	0.0	0.5	2.0
19th	ABC Great Beginnings-West Valley	UT - West Valley	136,009	1.5	Child Care	0.0	0.5	2.0
20th	Greenwood Charter School	UT - Ogden	86,833	1.0	Private School	0.5	0.5	2.0
21st	CC Discovery Center	UT - Monticello	2,604	0.0	Community Space	1.0	0.5	1.5
22nd	Paiute Indian Reservation ODC	UT - Cedar City	32,067	0.0	Community Space	1.0	0.5	1.5
23rd	Swaner Eco Center/Nature Preserve	UT - Park City	8,375	0.0	Community Space	1.0	0.5	1.5
24th	Bridger Elementary Garden Beds	UT - Logan	50,863	0.5	Community Space	1.0	0.0	1.5
25th	Thanksgiving Point Institute	UT - Lehi	64,006	0.5	Commercial Gardens	0.0	1.0	1.5
26th	Fairyland Day Care	UT - Sandy	96,127	1.0	Child Care	0.0	0.5	1.5
27th	Lit'l Scholars Learning Center	UT - Taylorsville	60,138	0.5	Preschool	0.5	0.5	1.5
28th	Crimson Cliffs High School	UT - Washington	26,583	0.0	Public School	1.0	0.0	1.0
29th	Hurricane High School	UT - Hurricane	17,212	0.0	Public School	1.0	0.0	1.0
30th	North Cache Middle School Atrium	UT - Richmond	2,672	0.0	Public School	1.0	0.0	1.0
31st	San Juan High School	UT - Blanding	3,663	0.0	Public School	1.0	0.0	1.0
32nd	ABC Great Beginnings-South Jordan	UT - South Jordan	71,198	0.5	Child Care	0.0	0.5	1.0
33rd	Nano Nagle Children's Center	UT - Holladay	30,636	0.0	Private School	0.5	0.5	1.0
34th	Tilley Time Child Care	UT - Taylorsville	60,138	0.5	Child Care	0.0	0.5	1.0
35th	USU Eccles Early Childhood Lab	UT - Logan	50,863	0.5	Private School	0.5	0.0	1.0
36th	Teton Science School	WY - Jackson	NA	0.5	Private School	0.5	0.0	1.0
37th	Mary Kay Nature Explore Classroom	UT - ?	-	0.0	Domestic Violence Shelter	0.0	0.5	0.5
38th	ABC Great Beginnings-Murray	UT - Murray	49,105	0.0	Child Care	0.0	0.5	0.5
39th	All About Kids Family Child Care	UT - Spanish Fork	39,371	0.0	Child Care	0.0	0.5	0.5
40th	Child Care Connection	UT - Hyrum	8,224	0.0	Child Care	0.0	0.5	0.5
41st	Janell's Garden	UT - Apline	10,477	0.0	Child Care	0.0	0.5	0.5
42nd	Little Brigham Aggies Play Garden	UT - Brigham City	19,150	0.0	Child Care	0.0	0.5	0.5

Figure D – Case Study Location Ranking Chart

### Case Study Method

The case studies for this design guide follow the case study method for landscape architecture projects proposed by Francis (2001), adjusted for appropriateness to the scale and context of an outdoor classroom. Aspects of the method that seemed to provide redundant information were consolidated into one topic (e.g., “managed by” and “maintenance and management” were consolidated into one “maintenance and management”).

Specific exceptions to the full case study list include site analysis, user/use analysis, peer reviews, and criticism. These were excluded because they were either not applicable to these case study projects, or time did not permit (as was the case in the user/use analysis). Of the eight recommended options for in-depth analysis, the “interviews with managers and maintenance people” was used to fill in any information gaps from the case study. Where appropriate, the following questions were asked in each interview.

### Interview Questions

- Q1 - What inspired you to organize/create this outdoor classroom?
- Q2 - What do you consider to be the most successful feature of this outdoor classroom?
- Q3 - What was the greatest challenge you faced in the design of this outdoor classroom?
- Q4 - What resources, if any, did you use to help you design this outdoor classroom?
- Q5 - If you could go back and do this project over, what would you change?
- Q6 - What advice would you give to other teachers who are interested in creating an outdoor classroom at their facility?
- Q7 - Can you help answer any information gaps about the project that couldn't be found in the full case study?

The full depth of these case studies and interviews was not included in the final design guide. Rather, a selection of inspiring ideas, site photographs, and applicable advice gleaned from the interviews was included to emphasize those elements of the case study that would be most applicable to the grant applicants. The interview process and questions were reviewed and determined to be non-human subject research according to USU IRB Protocol #12296.

## Interaction with Greenwood Charter School

### Project Initiation

The collaboration between Greenwood Charter School and Utah State University began when a teacher seeking landscape design help with “The Back Seven,” a parcel of undeveloped school-owned land, reached out to the Landscape Architecture and Environmental Planning (LAEP) Extension office at USU. The timeliness of the request provided an opportunity for informal experimentation on the design guide with a group of beginning students and teachers. As a result, the LAEP Extension office offered volunteer design services, and Greenwood was used as a case study for this thesis project.

### Public Participation

As a response to recommendations found in the literature review, public participation was selected as a primary emphasis in the design process for The Back Seven. A digital survey and event-tabling were the two primary methods of gathering input. Parents, teachers, and students are the primary users of The Back Seven, so the survey questions and tabling activities were catered to those user groups.

Project representatives from USU visited Greenwood to gather public input by tabling at two existing school events where parents, teachers, and students would already be in attendance—one at the end of the school year in May 2021, and one at the beginning of the following school year in August 2021. At the table, a simple game using rock chips and labeled glass jars was offered to allow visitors to engage with the process by casting a vote for a program element option of their choice (e.g., a nature play area, an outdoor classroom, etc.).

A survey was also offered on laptops and fliers with a QR code to gather more input on program element preferences, concerns and comments for The Back Seven, and materials and services that users may be willing to donate/volunteer during the design and construction processes. After these events, the survey was sent home with students and offered on the school’s social media page to reach families that could not come in-person. The methods of interaction with the students, teachers, and parents, and the questions in the survey were determined to be non-human subject research, according to USU IRB Protocol #12211.

Opinions were shared freely at these events, and over 40 families responded to the digital survey. The information gathered in this initial phase of the design process served as a foundation for subsequent design decisions, especially those regarding site elements and programming.

## Student Engagement in Design

Under the direction of Diana Sciandra, a proactive teacher at Greenwood, the school offered a landscape design class for 7<sup>th</sup> and 8<sup>th</sup> graders to accompany this project. The class used the 2021 Utah Outdoor Classroom Design Guide as a guiding framework by following its step-by-step process. Their interaction with the design guide was observed throughout the semester to better understand the challenges faced by beginning designers. After they finished going through the prescribed design process, additional anecdotal information was collected through an interview and reflective discussion with the class.

## Design Guide Update + Distribution

The design guide update was completed in January of 2022 and distributed on the Utah Office of Outdoor Recreation website. Major updates included:

- A revised design process focused on visioning, public participation, and volunteerism
- A set of printable and digital worksheets, including a pre-made digital public participation survey
- A simplification of drafting materials for greater ease of access
- A new set of site plan example drawings
- The addition of five case studies local to Utah
- A collection of recommended online resources and books

## LIMITATIONS + OPPORTUNITIES FOR FUTURE PROJECTS

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### Design Guide Feedback

Since the applicant feedback survey included only 12 respondents, it is difficult to get a thorough reading regarding how the design guide was utilized by the applicants. Since the design process in the guide is not intended to be supervised, it is also difficult to ascertain whether each portion of the guide was understood and applied correctly by the applicants. An instructor-led class or workshop, similar to the experiment conducted at Greenwood Charter School, could be implemented to help overcome this limitation, but it would be necessary to first gauge general interest and availability of applicants.

### Case Studies

Though many different sites were reviewed to be case studies, the inventory of existing outdoor classrooms in Utah was not comprehensive. Since there is no known database of outdoor classrooms in Utah, a unique methodology specific to this project was developed for the selection of the case studies. Additionally, relatively few locations from other states in the Intermountain West were included, though their environment and proximity could be more applicable than some locations in Utah (i.e., a case study in Southern Idaho may be more relevant to applicants living in Northern Utah than a case study from Southern Utah, due to the proximity and similarity of climate). A rigorous documentation and categorization of outdoor classrooms in Utah and throughout the Intermountain West would provide a valuable resource for the future of outdoor classroom research.

The time constraint presented another limitation for the case studies. Due to the limited time available to conduct the case studies and the distance of some, the only information gathered regarding Francis's (2001) user/use analysis in this study was from the interviews. However, conducting a full user/use analysis could be

beneficial for evaluating the successfulness of an outdoor classroom. A potential method for future ventures could be the post-occupancy evaluation proposed by Marcus and Francis (1997).

### Further Iterations of the Design Guide

Thus far, the Utah Outdoor Classroom Grant Design Guide has undergone two iterations. Though great progress has been made between the first and second editions of the guide, there is opportunity for further improvements through additional iterations. The methodology for improving the design guide proposed in this thesis project could be replicated in future years for the continual refinement of the guide and expansion of the guide as a resource to be used not only for this grant application, but in design curriculum for middle and high school age students.

## CONCLUSION

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There is great interest from educators and community organizations across the nation, and more recently in Utah, to utilize outdoor classrooms due to the well-studied educational, developmental, and health benefits they provide. This interest has been answered with grant opportunities through organizations like the Utah Office of Outdoor Recreation, and others nationwide. Outdoor classrooms are on the rise and outdoor classroom design is a unique branch of landscape architecture that is quickly expanding.

This design guide is a tool created to help improve the quality of outdoor classrooms being designed and built across the state, especially those without the guidance of a professional designer or landscape architect. Grant applicants can benefit from the guide by learning about the design process in a simplified way, using the ready-made worksheets to help them save time, and gaining inspiration for their project from the locally accessible case studies. Landscape Architects and experienced designers can also benefit from using this guide to learn about the parts of the design process that are unique to outdoor classroom design. For example, creating curriculum goals, building a team, incorporating student and public participation, and seeking for volunteers and donations are important aspects of the outdoor classroom design process that may be uncharacteristic for other types of landscape architecture projects.

Naturally, there remains an opportunity to continue researching this subject. Viable options include the facilitation of classes and design workshops focused on outdoor classroom design, future iterations of the design guide, and the creation of additional case studies to improve the documentation of outdoor classrooms (especially in Utah). This project and subsequent research surrounding outdoor classrooms will help contribute to nationwide efforts to help reconnect people with nature and bring learning outside.





# Utah Outdoor Classroom Grant **DESIGN GUIDE**



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# Introduction

# Utah Outdoor Classroom Grant Design Guide

## Introduction

This guide was developed by Utah State University's Landscape Architecture and Environmental Planning Extension Office, in partnership with the OOR, as a resource to support applicants developing a **site plan** for the [Utah Outdoor Classroom Grant application](#). A site plan is an aerial-view graphic representation of a design idea for your property. The purpose of this guide is to give you a step-by-step process for creating a site plan that is both functional and beautiful, and that communicates your ideas clearly.

This document will guide you through the following steps: (1) **Define Your Vision**, (2) **Build a Team** (3) **Get to Know Your Site**, and (4) **Create Your Site Plan**. Each step is accompanied by specific tasks that will guide you in the design process. After completing these steps, you will have the deliverables necessary to complete the "Required Supportive Materials and Attachments" section of your grant application.

Visual examples are provided to give you an idea of how to create a legible site plan. Your site plan does not need to mimic the graphic examples or outdoor classroom elements shown. Feel free to take creative license and create a site plan with the software and materials that are familiar to you.

## Design Process Overview

The design process outlined in this design guide has been adapted for the grant application based on a review of existing outdoor classroom design guides in other parts of the nation, as well as case studies from inspirational outdoor classrooms in Utah that are publicly accessible.

## Long-Term Benefit

Creating a thoughtful site plan for this competitive grant will take time and may be difficult, but it will be worth the effort. As you follow the steps in this guide, you will develop a high-quality site plan that can be used for more than just this grant application. The site plan can be used to communicate your vision to others, inspire community support, and even help you apply for other grant opportunities and donations in the future. If your plan is not awarded any funding this year, remember that you can use the same site plan to re-apply in years to come. So buckle-up, and get ready to make something amazing!



# **CHAPTER 1**

# **Site Plan Design Process**

## STEP 1: Define Your Vision

Before you begin designing the site plan for your outdoor classroom, define a vision that will guide the decisions you make throughout the design process. Then, establish specific goals that will help you achieve your vision. These goals will guide the design decisions you make in subsequent steps. Write down your vision and goals here as a reference.

*Tip: The interactive features of this guide won't save correctly in a web browser. Download the guide before use to avoid losing any work.*

### VISION

Write down a concise vision for your outdoor classroom in 1-3 sentences.

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### GOALS + DETAILS

What goals do you have for this outdoor classroom?

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What missing need(s) can this outdoor classroom fulfill?

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Who will be taught in this space (e.g., 3rd-6th grade students)?

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What activities can take place in this space?

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## STEP 2: Build a Team

The design process for your outdoor classroom will be much easier if you form a team of people that can help support you.

### TASK 1 - PARTNER UP WITH OTHER ORGANIZATIONS

You'll have a greater chance of being awarded grant funding if you can show that your outdoor classroom will be used by other local organizations aside from your own. Reach out to local non-profits and other community organizations to see if they have interest in partnering up with you on this outdoor classroom project.

### TASK 2 - FIND VOLUNTEERS + CONSULTANTS

Volunteers have been an important part of creating successful outdoor classrooms in Utah. Many people are willing to volunteer for outdoor classroom projects, but they need to be invited first. Some professionals in your area may also be willing to give volunteer consultant advice if you ask. Spread the word on social media, at school or community events, or through whatever method is best for your area. The more people that know about your project, the greater the chance you'll find people that are willing to volunteer.

	TEAM MEMBER NAME	CONTRIBUTION	CONTACT INFO
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### TASK 3 - GATHER PUBLIC INPUT

The best outdoor classrooms are successful because the designer knows what the users want/need. Since you're designing an outdoor classroom for other people to use, you should learn what they want so that your design can meet their needs. There are a variety of ways to collect this information. If many people will use your outdoor classroom, you may consider conducting a simple survey to get their ideas and opinions. Or you could ask for commentary on a social media post. If only a few people will use your site, you may just approach each individual and ask for their input. The [sample survey](#) included in this guide provides a few good questions to ask when gathering public input.



### TASK 4 - CREATE A "WISH LIST"

Make a "wish list" of all the **program elements** that you think should be a part of this outdoor classroom. Program elements are individual parts of the outdoor classroom that work together to make up the whole (e.g., an amphitheater, a pergola, a vegetable garden, etc.). Be sure to include any ideas from the public input you gather.

EXAMPLE LIST	
1	<i>Central Open Space</i>
2	<i>Messy Materials Area</i>
3	<i>Nature Art Area</i>
4	<i>Nature Playground</i>
5	<i>Entry Arbor</i>
6	<i>Pergola</i>
7	<i>1 Larger Outdoor Classroom</i>
8	<i>1 Smaller Outdoor Classroom</i>
9	<i>Water Play Area</i>
10	<i>Music Play Area</i>
11	<i>Storage Sheds</i>
12	<i>Vegetable Garden</i>
13	<i>ADA Pathways</i>
14	<i>Fruit and Shade Trees</i>
15	<i>Continued...</i>
16	-
17	-
18	-
19	-
20	-

PROGRAM ELEMENTS	
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## STEP 3: Get to Know Your Site

Your outdoor classroom design will be more effective if it responds to the unique context of your school. Complete the following tasks to gain a better understanding of the school grounds.

### TASK 1 - GET PERMISSION

Reach out to the site administrators to identify which areas you have permission to modify using this funding.

### TASK 2 - OBTAIN A MAP

Obtain a map of the site. The site administrators may be able to provide a physical or digital map of the area. If they don't have one, you can use the [Utah Parcel Viewer](#) or [Google Maps](#) imagery to get an aerial image for the base map.



Figure 1 - Site Map Example

### TASK 3 - GATHER INFORMATION

Talk to the site administrators or maintenance staff to understand what systems and utilities are in the area you intend to modify. (e.g., Wi-Fi, no-build zones, utilities, etc.)

Visit the area(s) you intend to modify and take measurements of any important features to help you draw a base-map. Meet with a maintenance staff member and record any observations and insights from the meeting.

#### Sample Questions to Ask Maintenance Staff:

- How is this area currently being used?
- What kind of maintenance does the area currently require?
- Could you foresee any challenges in using this area for an outdoor classroom?

## TASK 4 - NOTE PHYSICAL CONDITIONS

Understanding and recording the existing physical conditions of the area you intend to modify is an important first step to inform your design. Use a copy of your map to identify and record physical locations or conditions of the existing area. The following sample conditions will give you an idea of some of the physical conditions that could affect your outdoor classroom. Take time to visit your proposed area and spend time observing how, when, and by whom it is used.

### Sample Conditions:

- ACCESS: Where do people access your site (e.g., classroom doors, paths, playgrounds, etc.)?
- WEATHER: What weather conditions will affect your outdoor classroom (e.g., wind, snow, sun brightness, hot/cold, rain, air-quality, etc.)?
- SOUND: What sounds will affect your outdoor classroom (e.g., nearby roads, worksites, airplanes, recess activities, school generators, etc.)?
- SLOPE: What is the topography of your site (e.g., flat, sloped, hilly, etc.)?

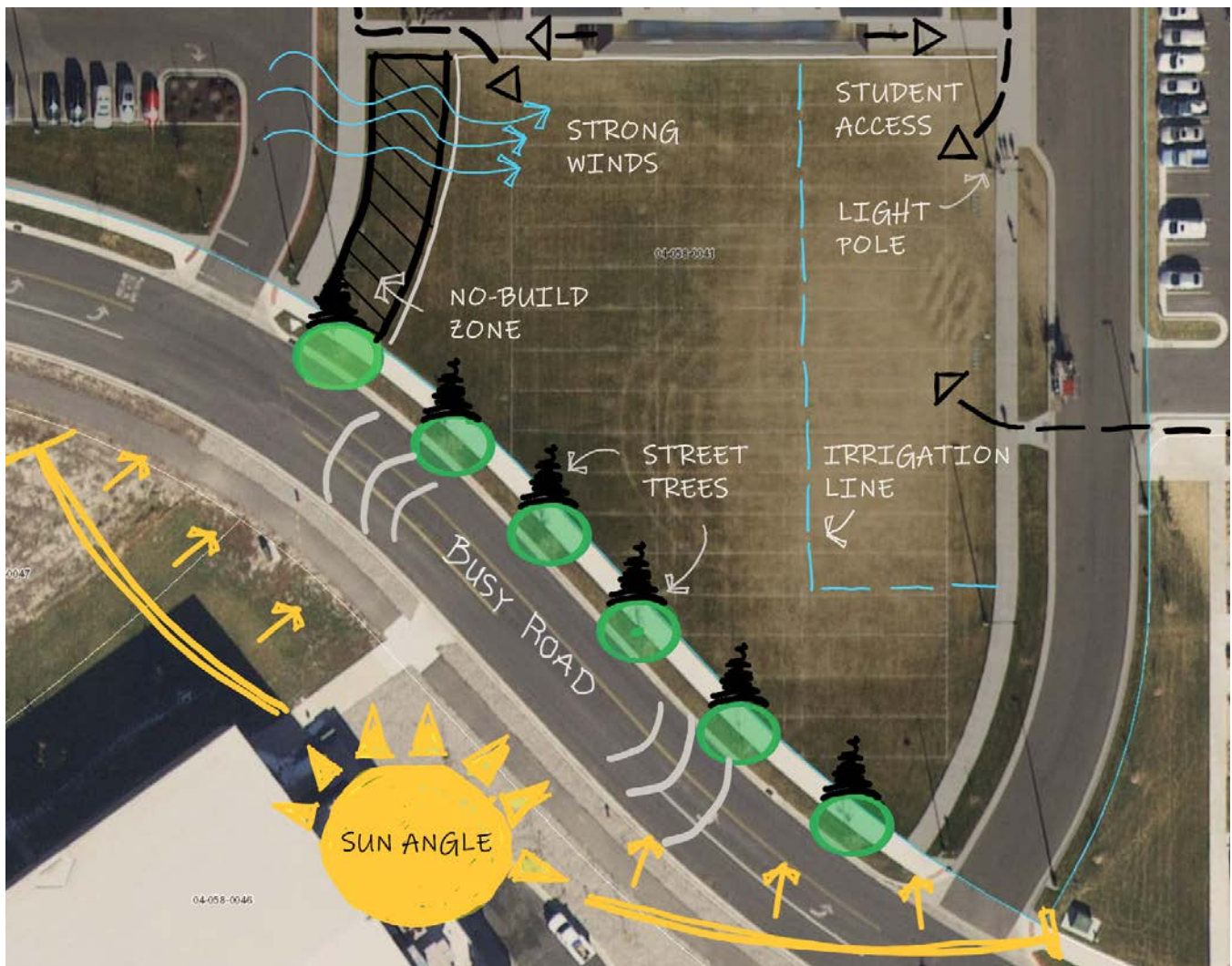


Figure 2 - Physical Conditions Map Example

## TASK 5 - CONSIDER SOCIOCULTURAL CONTEXT

What under-served populations in your community could use this outdoor classroom (e.g., English language learners, refugees, local Native American tribes, etc.)?

UNDER-SERVED POPULATIONS

What physical and intellectual disabilities affecting the users can you accommodate through your design (e.g., visual, hearing, speech and language, orthopedic impairments, etc.)?

DISABILITIES

## TASK 6 - LIST OPPORTUNITIES AND CONSTRAINTS

Every site is unique and will present different opportunities on which you can capitalize, as well as constraints to which you will need to respond in your design. Identifying these opportunities and constraints will guide your design development and impact your project budget and timeline.

OPPORTUNITIES
(e.g., hillside can provide extra seating)

Now that you've listed and mapped the physical and socioeconomic conditions of your site, think about what opportunities and constraints they will present.

CONSTRAINTS
(e.g., strong winds could distract from class and be cold during the school year)

## TASK 7 - DEFINE A SITE PLAN BOUNDARY

Based on the information you gathered in the previous tasks, draw a boundary on the map around the area you think will be best suited for your proposed outdoor classroom.



Figure 3 - Site Plan Boundary Example

## STEP 4: Create Your Site Plan

Now that you've gotten to know your site and have defined a site plan boundary, you can begin designing a site plan that fits with your vision and goals. This plan should include all of the proposed program elements and show their shape, size, and physical location. The examples given demonstrate the design process using the worksheets provided in chapter two. You can print them off and follow along. The examples were drawn using a pencil, a pen, a Sharpie, and colored pencils. Remember, the site plan can be created using any style and drawing materials that you choose, but it should be clear and legible. The examples shown are just to give you an idea of what the site plan could include.

### TASK 1 - DRAW YOUR SITE PLAN BOUNDARY

Print the ["Site Plan Base Grid" worksheet in Chapter Two](#) and use it to draw the boundary of your site plan at a measurable scale, along with any other important existing features that could affect your outdoor classroom. The worksheet was created at a scale of 1" = 10', so each square on the grid paper represents 1'x1'. If your site is too large to fit onto the sheet, you can make it fit by treating each square as a 2'x2' which would change it to a 1" = 20' scale. Typically, site boundary lines are represented by a pattern of one dash with two dots, as shown here.

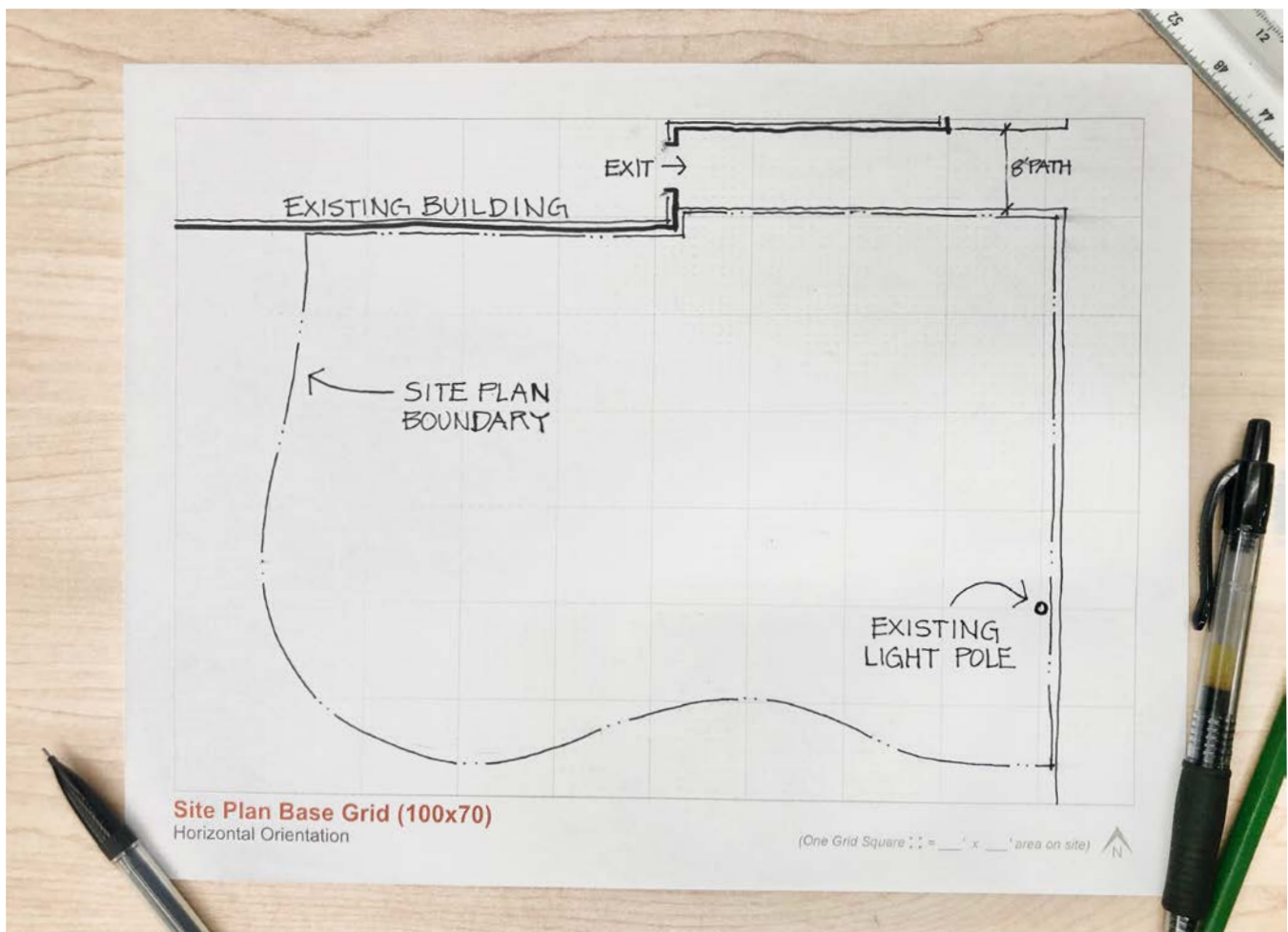


Figure 4 - Site Plan Boundary Example

## TASK 2 - ASSIGN A SIZE TO EACH OF YOUR PROGRAM ELEMENTS

Assign a rough size to each of your program elements by using the chart here. Refer to the ["Concept Exploration Cutouts" worksheet in Chapter Two](#) for sizing examples.

EXAMPLE LIST		SIZE
1	<i>Central Open Space</i>	L
2	<i>Messy Materials Area</i>	M
3	<i>Nature Art Area</i>	S-M
4	<i>Nature Playground</i>	L
5	<i>Entry Arbor</i>	S
6	<i>Pergola</i>	M
7	<i>1 Larger Outdoor Classroom</i>	L
8	<i>1 Smaller Outdoor Classroom</i>	M
9	<i>Water Play Area</i>	M
10	<i>Music Play Area</i>	M
11	<i>Storage Sheds</i>	S
12	<i>Vegetable Garden</i>	M-L
13	<i>ADA Pathways</i>	-
14	<i>Fruit and Shade Trees</i>	M-L
15	<i>Continued...</i>	-
16	-	-
17	-	-
18	-	-
19	-	-
20	-	-

PROGRAM ELEMENTS		SIZE
1		
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### TASK 3 - CUT OUT A BUBBLE FOR EACH PROGRAM ELEMENT

Use the "Concept Exploration Cutouts" worksheet in Chapter Two to label and cut out an appropriately sized bubble for each program element.

### TASK 4 - EXPLORE CONCEPT ARRANGEMENTS

Arrange the cut-out bubbles inside your outdoor classroom boundary in a way that seems logical to you. Using these cutouts allows you to quickly explore several different arrangements until you find one that works well. When you find one that you like, take a picture so you don't forget!

*Tip: The design process is iterative. As you create your site plan, don't be afraid to go back to previous steps and make changes to your design.*

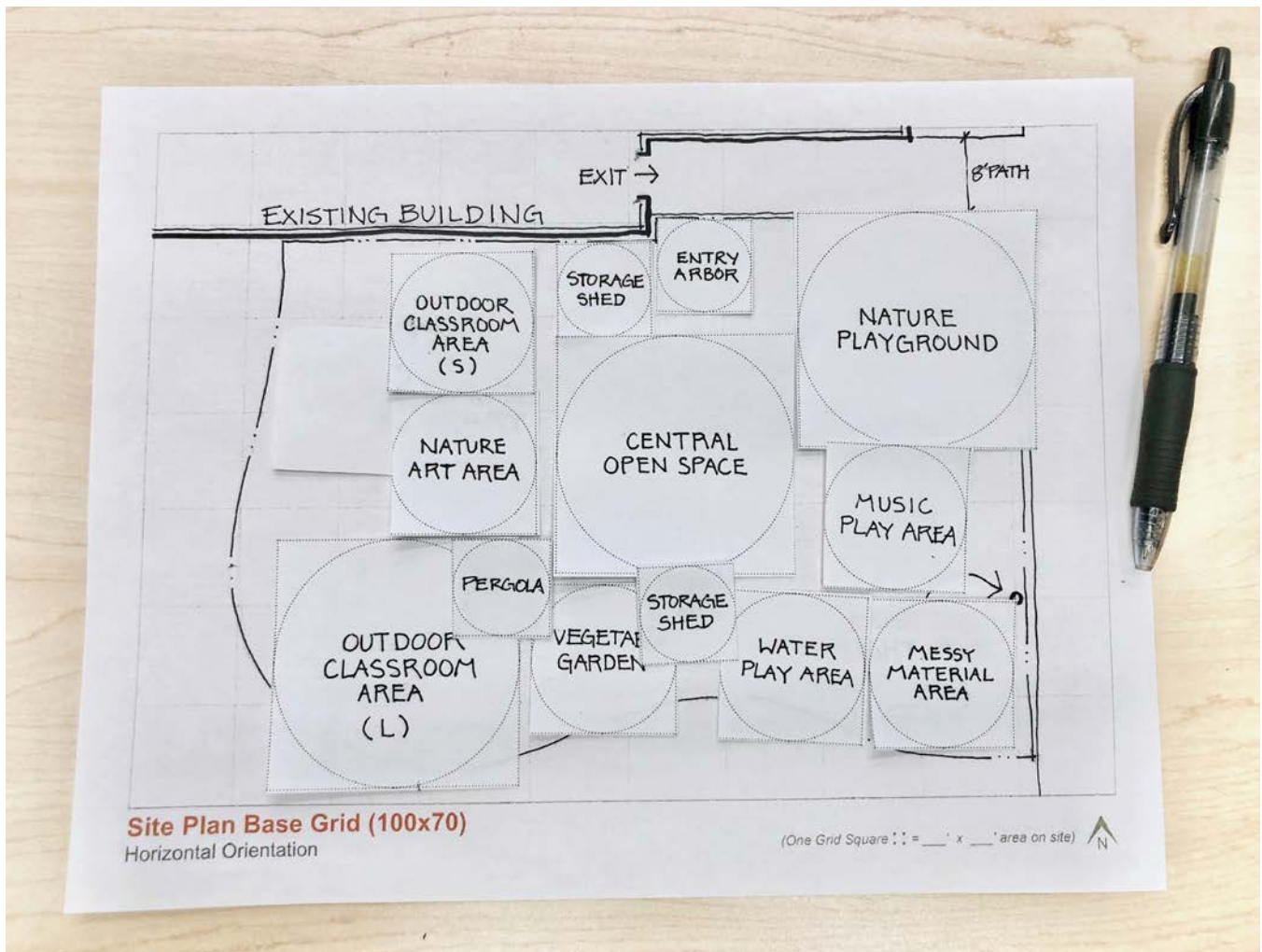


Figure 5 - Concept Bubble Exploration Example

## TASK 5 - DRAW A CONCEPTUAL SITE PLAN

Now it's time to give form to your arrangement. If you have a roll of trace paper, put a sheet over the top and draw on top of your bubble arrangement. If you don't have trace paper, remove the paper bubbles and refer to the picture you took as you draw. If your first concept doesn't turn out how you want it, keep trying again until it feels right.

### PATHS

Start by drawing a circulation system of paths that connect the program elements together and allow people to access these elements. Connect the path(s) into an existing path or building entrance. Paths for outdoor classrooms should typically be 3'-5' in width.

### PROGRAM ELEMENTS

Draw a rough boundary for each program element. Give them a shape that helps them fit together inside of the site boundary better than plain circles would. Try not to leave large gaps of space between the shapes for each program element.

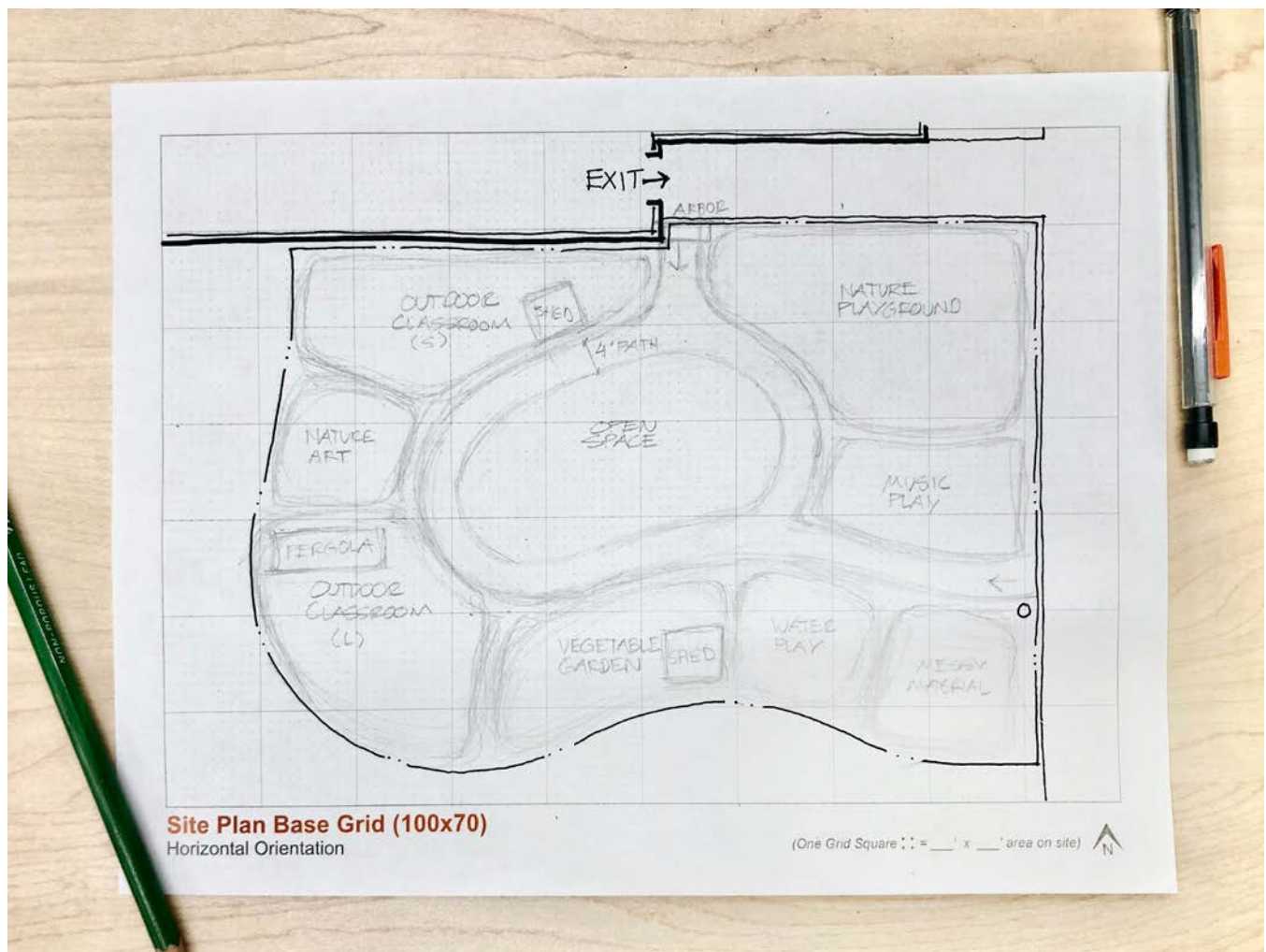


Figure 6 - Concept Bubble Sketch Example

## TASK 6 - SKETCH DETAILS

Now, draw over the top of your concept plan to add detail. Refine each program element area by drawing any details that will help communicate how the area(s) will be laid out. Erase the original concept bubble lines so they don't distract from the details.

Draw trees or other shade structures over areas that will need shade to feel comfortable. Use a mix of deciduous and evergreen trees to add variety and make the space beautiful throughout the year. Draw shrub areas, fences, or other screening elements to help define the edges of each space.

If you don't know the size of something you want to draw, look it up online or take a tape measure into the world and find out for yourself!

*Note: You and your contractor are responsible for ensuring that your outdoor classroom is compliant with ADA accessibility standards. Review [this website](#) for more information.*

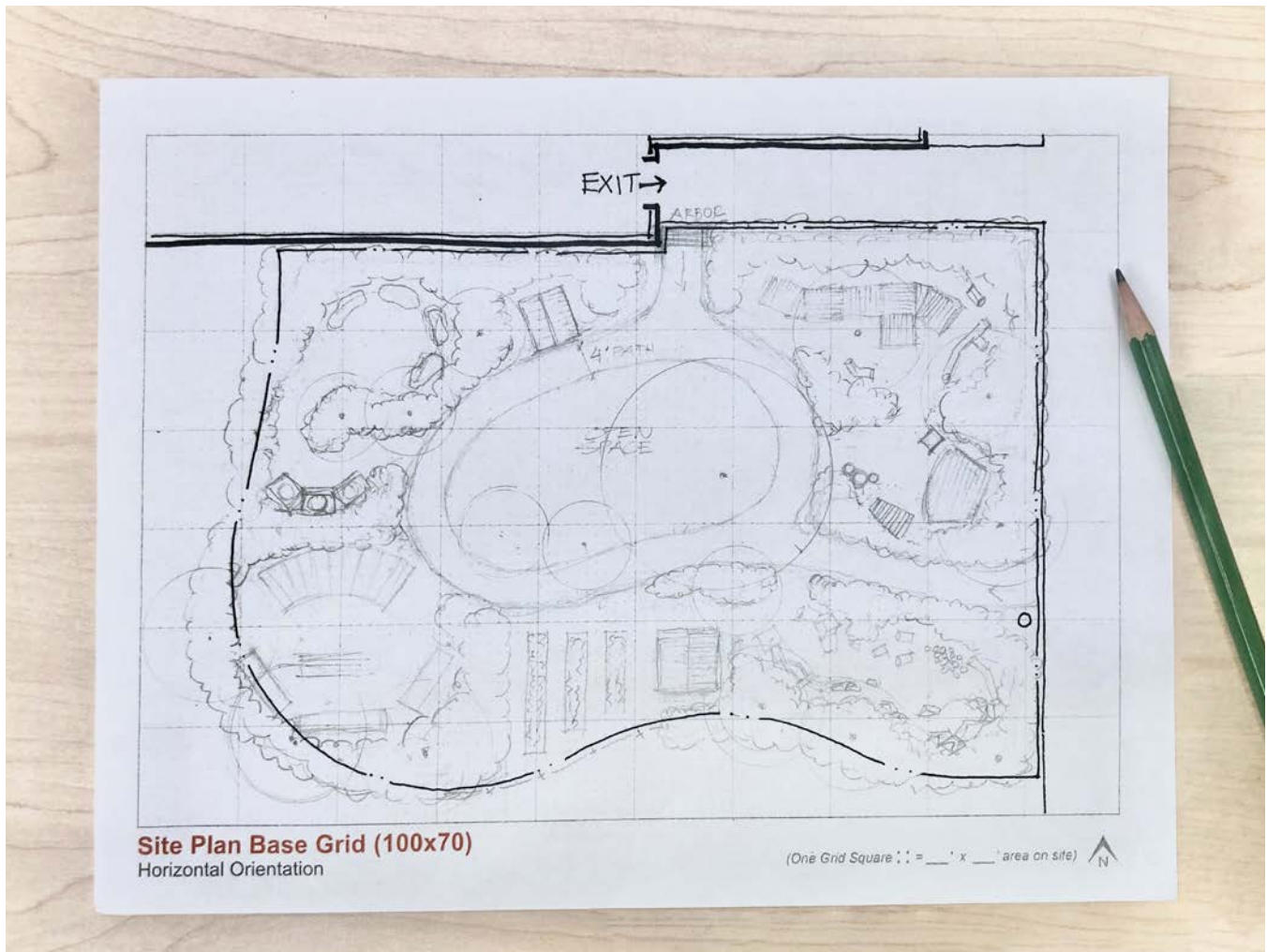


Figure 7 - Sketched Details Example



## TASK 7 - COMPLETE BUDGET SPREADSHEET AND TIMELINE

Based on your list of program elements and detailed design features, fill out the provided budget spreadsheet on the grant application by researching materials quantities and costs for each of the items in your site plan draft. Then complete the provided timeline sheet for when your classroom will be built. You may not be able to fund everything in your site plan with just this grant. Be clear about which parts of your design will be funded by the grant money.

**BUDGET SPREADSHEET**

It may be helpful at this point to reach out to local contractors, businesses, and suppliers to gather local pricing and explore options for matching donations of materials and/or labor. They can also critique your site plan and suggest any necessary changes. Refer to the Outdoor Classroom Grant Guide for information on matching funds and budgeting.

## TASK 8 - MAKE A MAINTENANCE PLAN

Your outdoor classroom will be great when it's first built, but it will require maintenance to stay that way. Answer these questions to help you plan for the ongoing maintenance of the site.

*Who will maintain this space?*

---

*What materials will be required to maintain this space (e.g., truck, lawnmower, snow shovel, etc.)?*

---

*How often will this space be maintained?*

---

## TASK 9 - REVIEW VISION + GOALS

Look back at the vision and goals you set at the beginning of this guide. Does your design accomplish those goals? If not, make any necessary changes so that your outdoor classroom will meet those goals.

## TASK 10 - FINALIZE THE LINE WORK

Refine the line work by drawing over it with a pen and erasing any unused lines. If something rises high off the ground (like a shed), you can give it a thicker line weight to help it stand off the page. It's okay to make small mistakes, as long as your design intent is still communicated well. However, you may want to have White-out on hand to cover up any major mistakes, so you don't have to re-draw the plan from scratch.

If you don't know how to draw something in plan view (from above) for your site plan, you can draw a simple shape, like a square or circle, and add a label later to help clarify what it is.

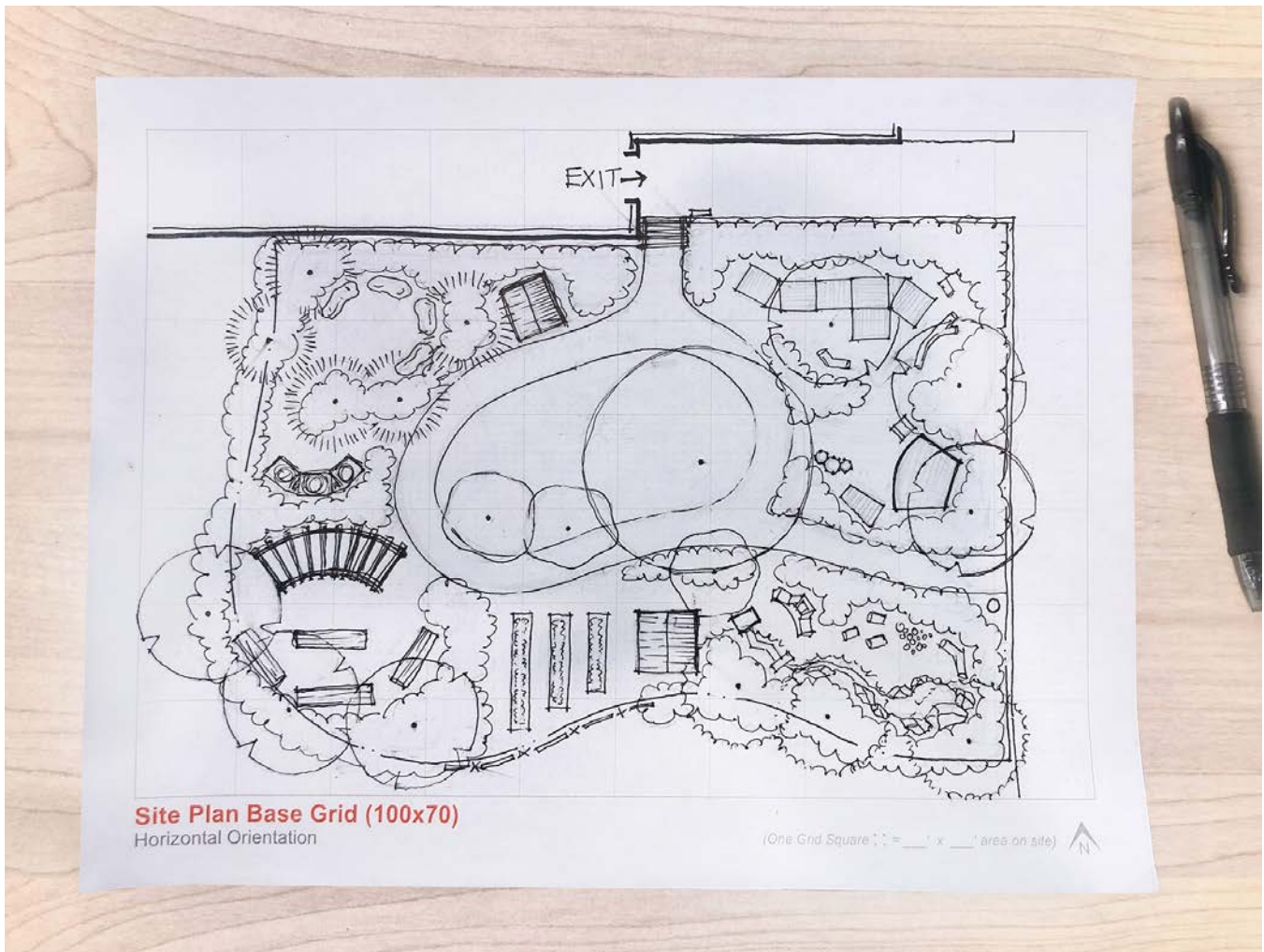


Figure 8 - Site Plan Line Work Example

## TASK 11 - ADD LABELS AND COLOR

It's time to add clarity to your drawing to get it ready for the grant application!

### LABELS

Add notes and labels to help your ideas come through more clearly to other people. If you're going to label it by hand, it's usually best to do so before coloring the drawing, so that the pen ink isn't blocked by the colored pigment. You can also add labels digitally after it's finished, if that is easier for you.

### COLOR

Add color to further clarify your design. Try to choose colors that are indicative of the objects being colored (e.g., wood elements colored a shade of brown). You can test how colors will look on a piece of scratch paper first, so that you don't make a mistake on your final drawing.

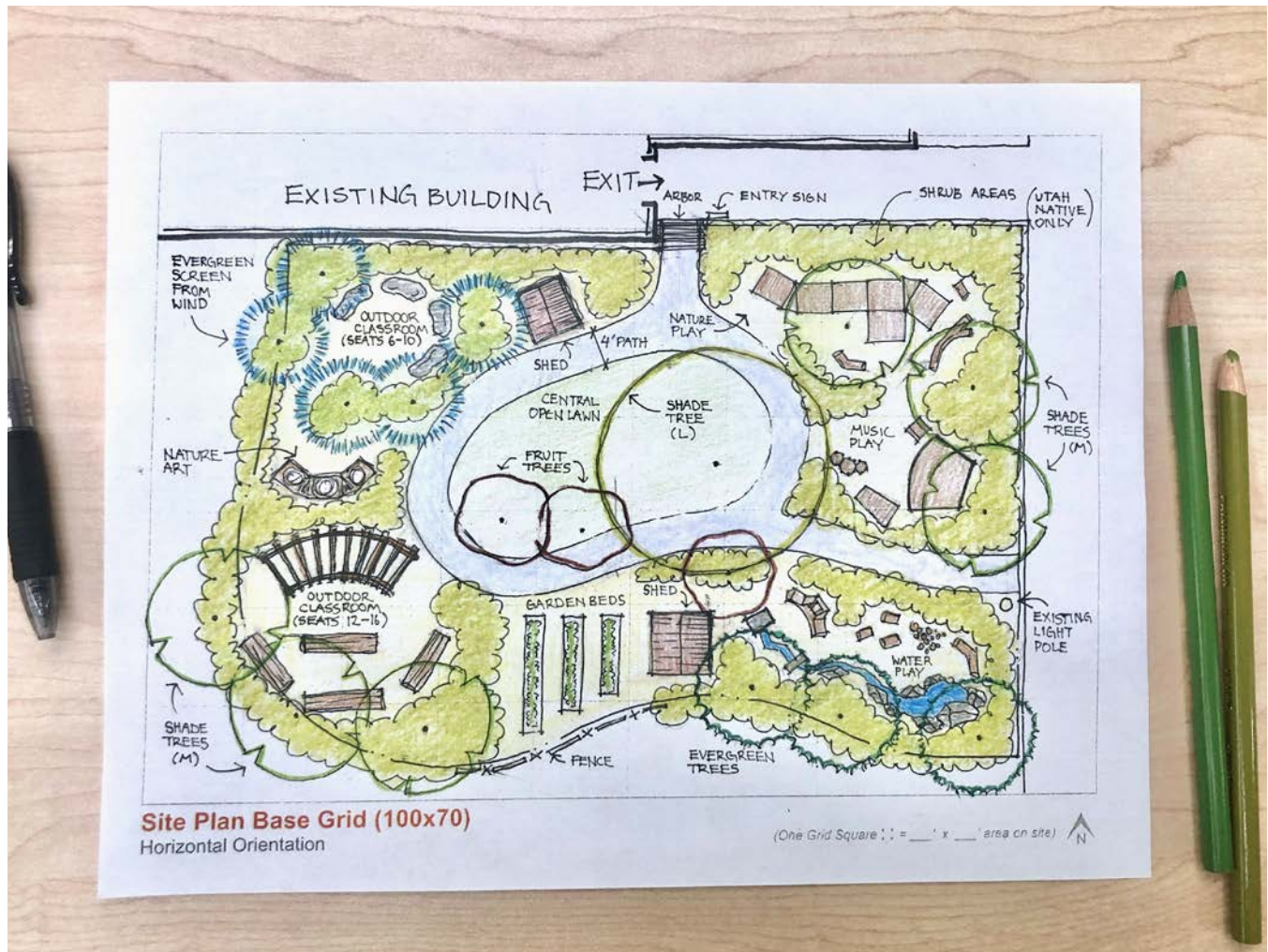


Figure 9 - Colored Site Plan Example

## TASK 12 (OPTIONAL) - REFINE GRAPHICS

If you have the time, you may consider adding further graphic refinements, such as detailed coloring, texturing, and shading. This is unnecessary for the purposes of this grant application, but it can make for a more engaging drawing. If you intend to use your site plan in other settings, it may be worth the extra effort!

If you choose to add these refinements, make sure that the shadows and shading have a consistent direction and graphic style. In this example, all shadows are cast towards the top right of the paper (northeast) and are drawn with a mixture of black and brown colored pencils. Taller elements should have longer shadows, while shorter elements should have smaller shadows. Mixing several different colors can also help communicate depth and variety, as shown in the shrub areas and central open space grass.

*Note: The award amount for this grant would likely only fund one or two areas of the design shown here. If your site includes more elements than can be funded by this grant, keep applying for this grant every year and look for additional funding sources.*

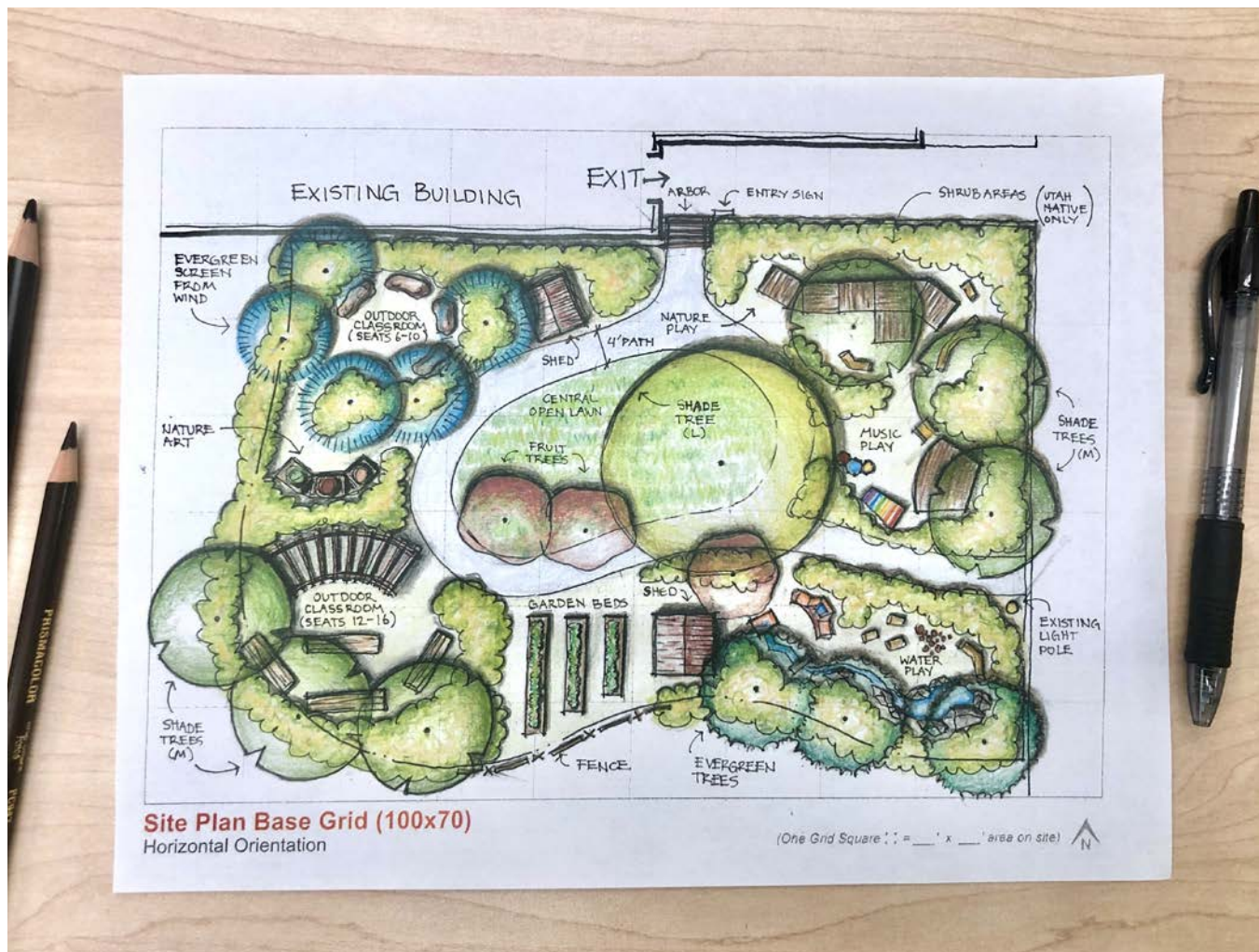


Figure 10 - Refined Site Plan Example

## TASK 13 - ADD SUPPLEMENTARY DESCRIPTION + PRECEDENT IMAGES

It can be difficult to communicate your thought process behind the design decisions made in your site plan. To help the grant selection committee better understand the details and rationale behind your site design, you may want to include a narrative description and precedent images. See the example below:

### SUPPLEMENTARY DESCRIPTION

- The trees and shrubs bordering the classroom will be native to Utah to help teach students about local plant species and ecosystems. ----->
- The desks and benches will be movable and weatherproof to allow for ADA access and increase their durability. ----->
- The hardscape in the classroom area will be made of permeable pavers to allow for stormwater drainage from the hill and teach students about sustainable hydrology. ----->



## Submit Site Plan

Lastly, review the finalized site plan with your school administration to make sure it is approved. After getting approval, attach an image of your site plan and any supplementary descriptions/images to your grant application. Submit the completed application to the Utah Office of Outdoor Recreation and pat yourself on the back. Good luck!



**STEP 1:**  
Define Your Vision



**STEP 2:**  
Build a Team



**STEP 3:**  
Get to Know Your Site



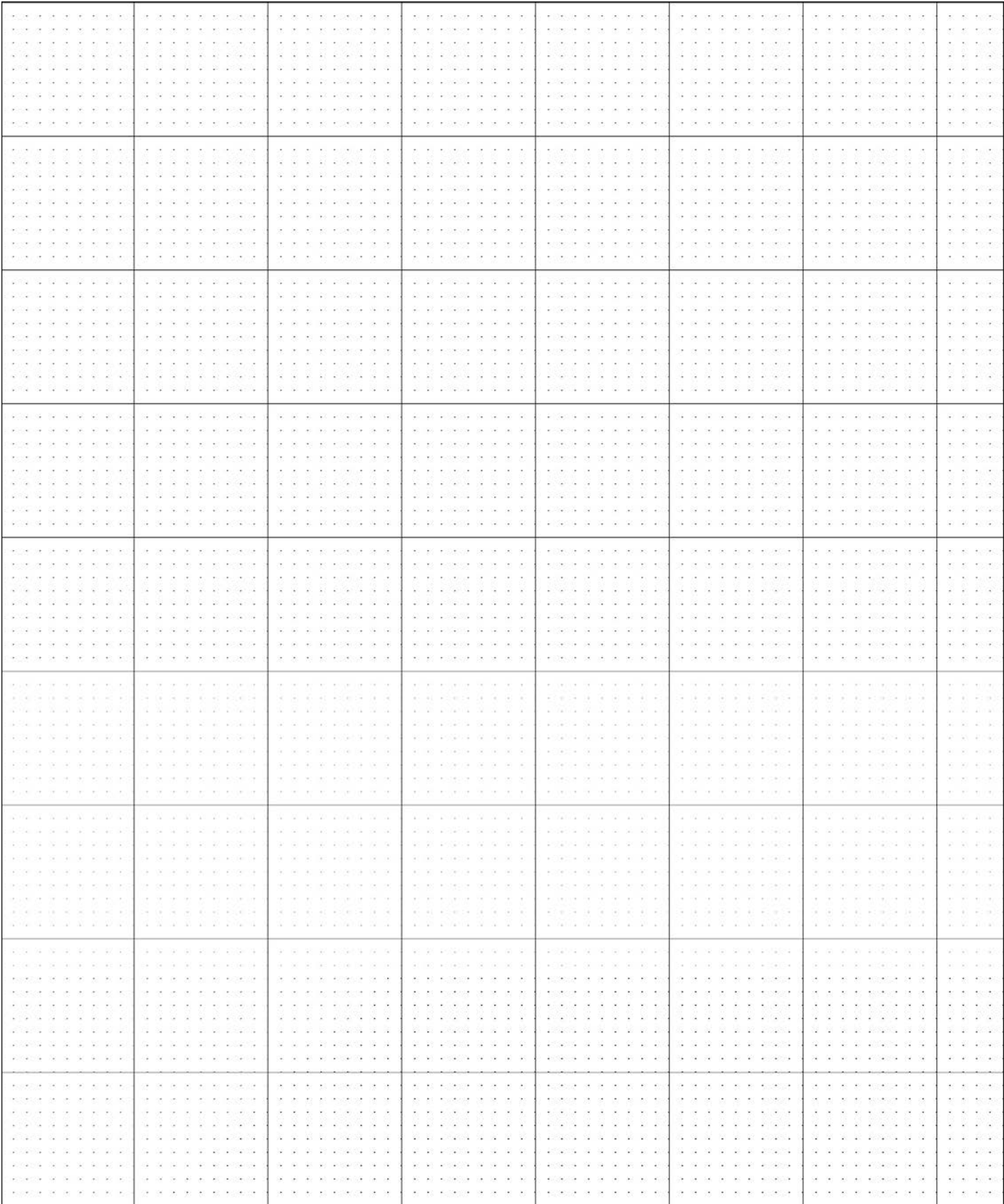
**STEP 4:**  
Create Your Site Plan



**SUBMIT  
SITE PLAN**

## **CHAPTER 2**

# **Worksheets**



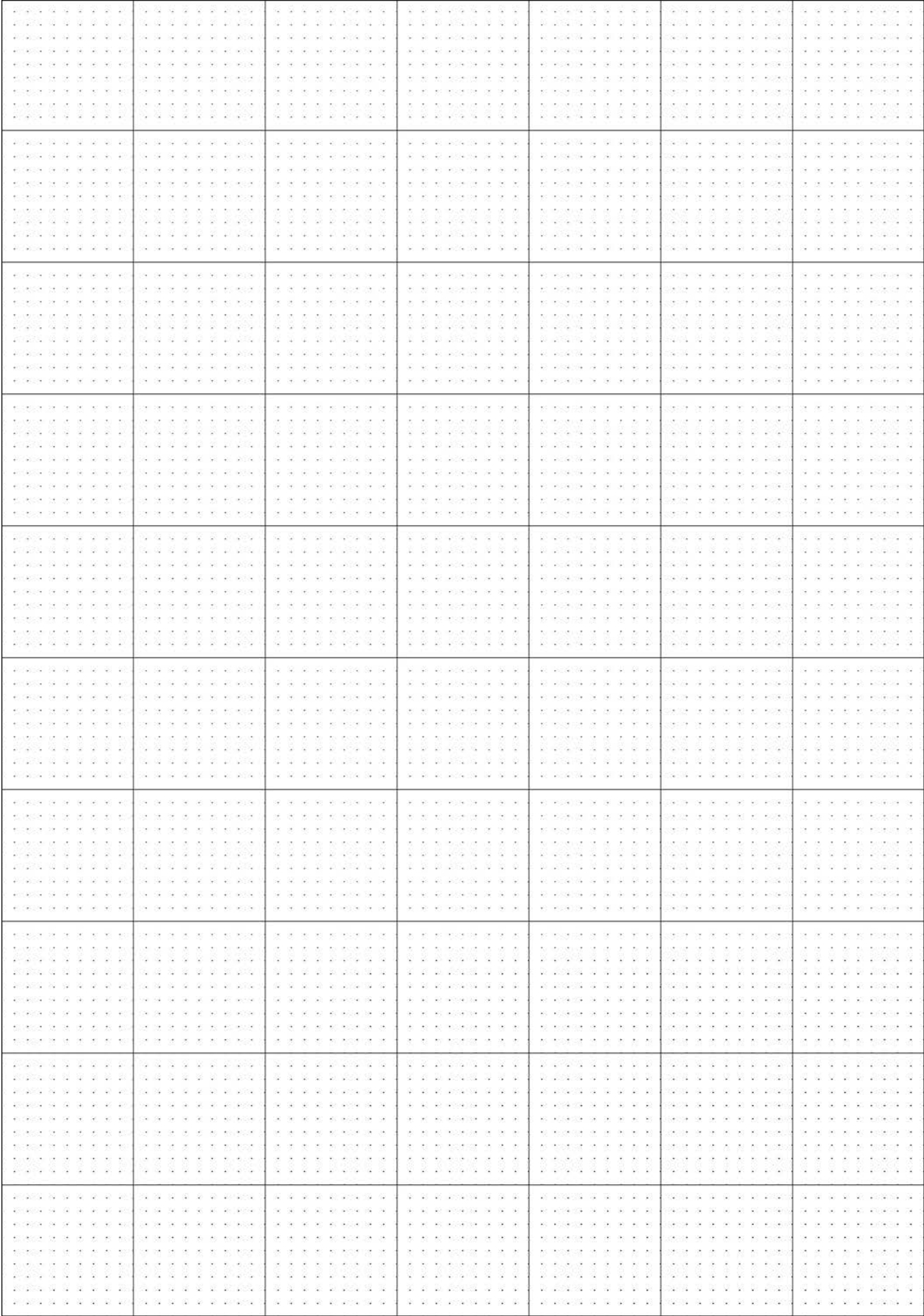
**Site Plan Base Grid (75x90)**

Vertical Orientation

(One Grid Square = \_\_\_' x \_\_\_' area on site)







(One Grid Square = \_\_\_' x \_\_\_' area on site)

# Site Plan Base Grid (100x70)

Horizontal Orientation

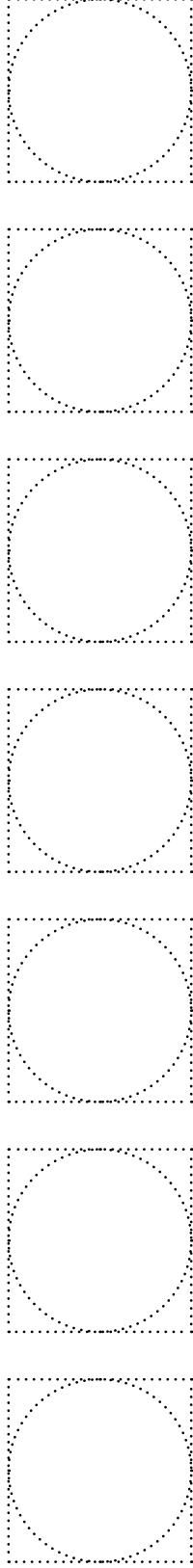
# Concept Exploration Cutouts

1" = 10' Scale | S/M/L Bubble Cutouts

## 10'x10' - Small

### Example Items

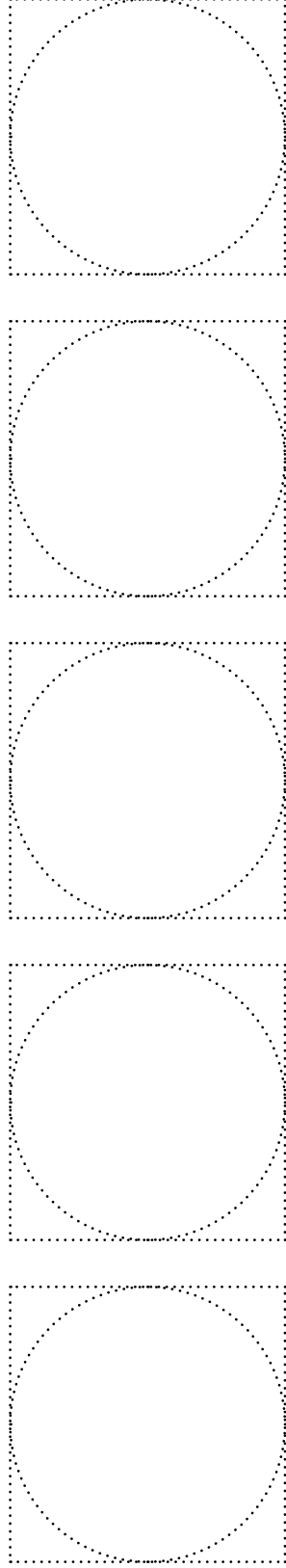
- Storage Shed
- Trellis/Arbor
- Pergola
- Outdoor Classroom (5-10 students)



## 15'x15' - Medium

### Example Items

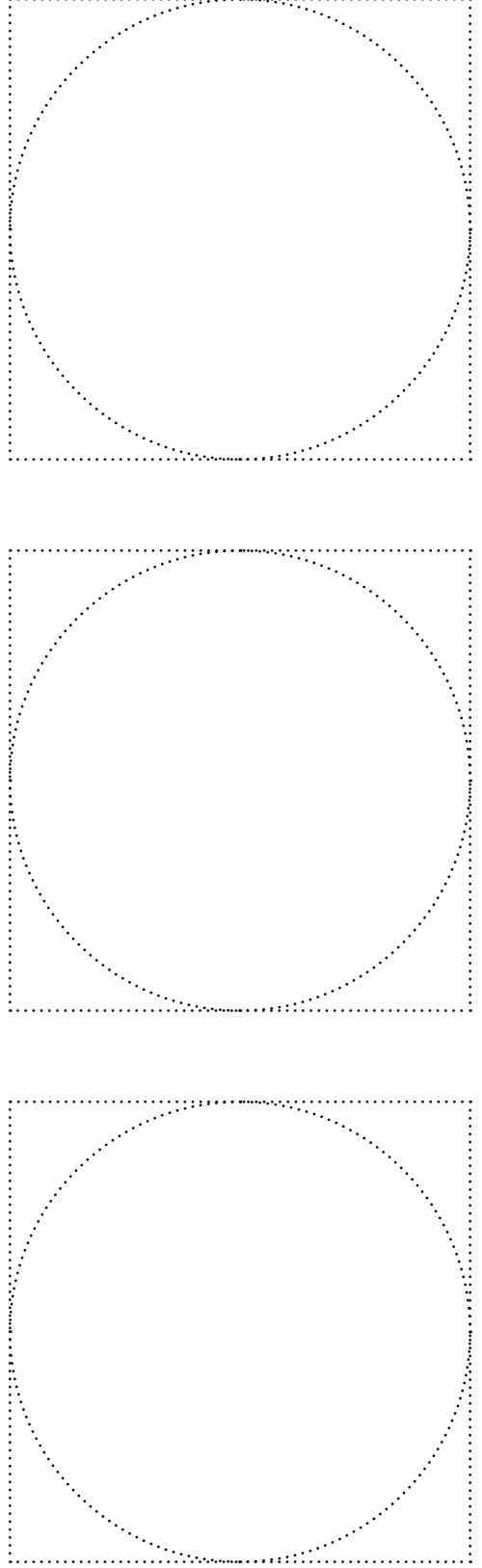
- Pavilion
- Play Areas
- Outdoor Classroom (10-15 students)



## 25'x25' - Large

### Example Items

- Large Pavilion
- Large Tree
- Playground
- Amphitheater
- Outdoor Classroom (15-25 students)



# Outdoor Classroom Sample Survey

Gather Community Input

[CLICK HERE](#)  
FOR A DIGITAL COPY OF  
THIS SURVEY

## Outdoor Classroom - Sample Survey

This is a sample survey for gathering input from the community during your outdoor classroom design process. Feel free to edit these questions as necessary to fit the needs of your site and survey group.

1. What is your name?

---

2. What is your email address?

---

3. What is your anticipated role with this outdoor classroom?

*Check all that apply.*

Teacher

Student/Learner

Community Member

Other:  \_\_\_\_\_

4. What is something you would like to see built in this outdoor classroom?

---

---

---

---

---

5. What concerns, if any, do you have about this outdoor classroom?

---

---

---

---

---

6. What are you willing to contribute to this outdoor classroom?

*Check all that apply.*

- Volunteer Labor
- Materials for Landscaping
- Monetary Donations
- Design/Construction Services
- Event Planning/Programming
- Maintenance Help

Other:  \_\_\_\_\_

7. Please share any other comments you may have about this outdoor classroom here.

---

---

---

---

---

Thank you.

## **CHAPTER 3**

# **Case Studies**

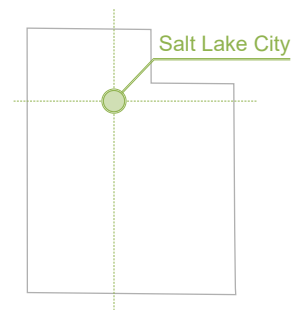


# COMMUNITY GARDENS

garden | community | education | healthy | local

## Wasatch Community Gardens' Campus

Wasatch Community Gardens' Campus is an educational facility that has emerged over the past 30 years, since the garden's initial conception in 1989. The facility includes several outdoor classrooms and demonstration gardens, outdoor and indoor kitchens, an apartment complex, and office facilities for employees. Although Wasatch Community Gardens began as a small grassroots effort to provide healthy food options for locals, the organization has grown to help feed and educate people at 17+ locations throughout the Salt Lake Valley. This new educational campus in Salt Lake City will serve as headquarters for the organization for years to come.



### Quick Facts

Location Salt Lake City, UT	Size 0.6 Acres	Designed 2019-2020	Constructed 2020-2022	Total Cost \$6.1 Million
Context Suburban Neighborhood	Landscape Architect GSBS Architects	Consultants Many Contributors	Client Wasatch Community Gardens	Key Features Outdoor Classrooms Teaching Gardens Outdoor Kitchens



1.1



1.2



1.3

## Inspirational Ideas

### Preserved Site Materials

Wasatch Community Gardens' Campus required the demolition of several existing elements on the original site, but they did not go to waste. For example, wood from felled trees and stones from an old fireplace were preserved and reused in the landscape in a variety of ways. Despite the fact that pathways cover the site, great effort was taken to preserve as much of the original fertile soil as possible for use in the educational garden beds.

### Keeping the "FUN" in Function

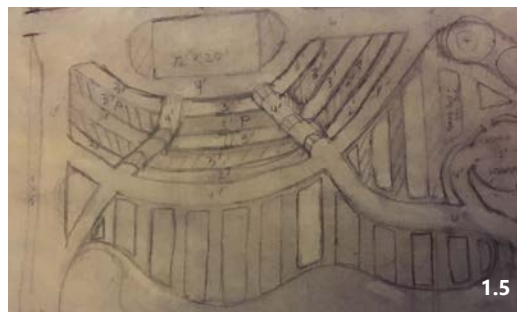
An outdoor classroom needs to be functional, but that doesn't mean it can't be fun. The WCG Campus incorporates artistic metal fencing and wiggly, whimsical, winding paths through various parts of the garden to allow children to have fun while exploring the site. It does require more work and planning to accommodate such creativity, but employees affirm that it is worth the effort!

### A Diversity of Examples

Wasatch Community Gardens' Campus exists to teach gardening principles to people with varied backgrounds and life situations. Because of this, a diversity of examples are provided to demonstrate options. For instance, garden beds and paths throughout the site are built with different widths, ranging from 2'-4'. In this way, people can experience different garden layouts and implement sizes that are most comfortable at home.



1.4



1.5



1.6

1.1 Metal fencing is transformed into a sculptural element through artistic expression.

1.2 Benches are made from the Siberian Elm Tree wood that was cut down during construction.

1.3 Rock from the original chimney piece is re-purposed into stepping stones through planting beds.

1.4 Stone bricks arrange the frame for what will soon be an herb spiral.

1.5 This sketch shows a possible layout for varying widths of path, planter boxes, and garden beds.

1.6 Teaching gardens with varying widths allow users to experience different garden arrangements.



1.7



1.8

1.7 ADA accessible chat pathways and benches line the Growing Traditions Garden.

1.8 ADA accessible planter boxes border a future outdoor classroom area shaded by a pergola.

1.9 Storage sheds line a large gathering space covered in bark nuggets.



1.9

**Cost Details**

Although this is a large-scale project with extensive planning and design involved, individual site element costs can help you gauge the cost of your own project. Price will vary depending on size, material quality, and labor costs.

**Overall Costs**

- Total Project Costs - \$6.1 Million
- Design/Consultation - \$220,000
- Construction - \$4.2 Million
- Property Acquisition - \$1.7 Million

**Individual Site Element Costs**

- \$50,000 – Outdoor Kitchen
- \$12,000 – Pergola
- \$8,000 – ADA Chat Pathways
- \$5,000 – Garden Demo Area
- \$5,000 – Shed
- \$3,000 – ADA Planter Boxes
- \$2,500 - Materials





1.10

### Expert Tips for Your Outdoor Classroom

#### 1. Define Your Vision

Your project will constantly change as new information, challenges, and opportunities arise. Defining a vision at the beginning of the project can help guide your decisions through every hurdle in the design and construction process.

#### 2. Assemble a Team

Assembling a team to help guide decisions is important to making your design functional and successful. As one employee put it, "this is a band, not a solo performance." Don't feel like you need to do everything yourself.

#### 3. Be Flexible

As you progress in the design process, new information will arise that may necessitate changes to your plan. This will happen all the way up until your site is built—and even afterwards! Be patient and flexible with the changes as they come and accept that you can't always control every situation, especially when other people are involved.

1.10 A simplified site plan designed for way-finding is displayed at each entrance to the campus.

### Resources

#### Gardening "How-to" Videos

<https://wasatchgardens.org/resources>

#### Community Garden Locator Map

<https://wasatchgardens.org/community-gardens/find-a-community-garden>

#### Facebook Page

<https://www.facebook.com/wasatchgardens/>

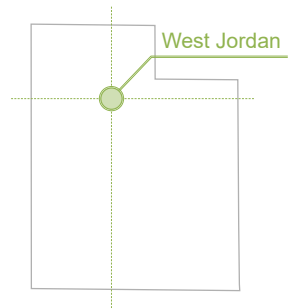
#### Contact

Marybeth Janerich - Community Education Director  
marybeth@wasatchgardens.org



## Conservation Garden Park

Conservation Garden Park is a free public garden focused on educating the community about water consumption in the landscape. The park is an appendage to the Jordan Valley Water Conservancy District, a primary water distributor for much of the Salt Lake Valley. The park began in the early 2000's when the conservancy district felt inspired to educate the public about water scarcity and water-wise landscape practices in the Intermountain West. They obtained funding from the Central Utah Project Completion Act of 1992 for a "Conservation Garden Park" that would serve as a vehicle to communicate these ideas to the public. The park has expanded several times since then and now boasts seven landscape education areas, a public plaza, and an education center for hosting classes.



### Quick Facts

<b>Location</b> West Jordan, UT	<b>Size</b> 8+ Acres and Growing	<b>Designed</b> 2001-Ongoing	<b>Constructed</b> 2001-2019	<b>Total Cost</b> \$10+ Million
<b>Context</b> Residential/Agricultural Near Jordan River	<b>Landscape Architects</b> Deneen Powell Atelier Landmark Design	<b>Consultants</b> N/A	<b>Client</b> Jordan Valley Water Conservancy District	<b>Key Features</b> Demonstration Gardens Educational Signage



2.1

**Inspirational Ideas**

Throughout the seven landscape demonstration areas, many ideas can be found for water wise landscaping and educational signage.

**Interpretive Signage**

Many signs are shaped as leaves and have text with sketched images demonstrating the design principles used in the area. Visitors observe the design principles in application around them as they read the signs. Other signs identify plant species and other materials used in the landscape.

**Water Wise Planting**

Though gardens in the park appear lush and beautiful, they are primarily composed of plant species that are adapted to Utah's dry climate and use very little water. Plants with similar water needs are grouped to save on irrigation costs and keep other plants healthy. Visit the Park in person or check out their online tours and plant database to find plants that will fit the needs of your site.

**Interactive Elements**

People remember what they learn when they experience something firsthand. Incorporating lesson material in the landscape is a good way to engage with those who will be taught in the outdoor classroom.



2.2



2.3



2.4

2.1 Leaf-shaped educational signage teaches about design.

2.2 A cross-section of different soils shows water percolation behavior.

2.3 Landscape rock materials are displayed and labeled.

2.4 Jumbo-sized chess pieces provide a fun interaction for kids.

2.5 A mountain water pipe encircles a path to demonstrate scale of water infrastructure.



2.5



2.6

### Challenges

Maintenance has been a great challenge for the park, because there is no room for trucks to access the main portions of garden, and the smaller paths are only big enough for a wheelbarrow. Better planning for maintenance could've saved much of the staff's energy.

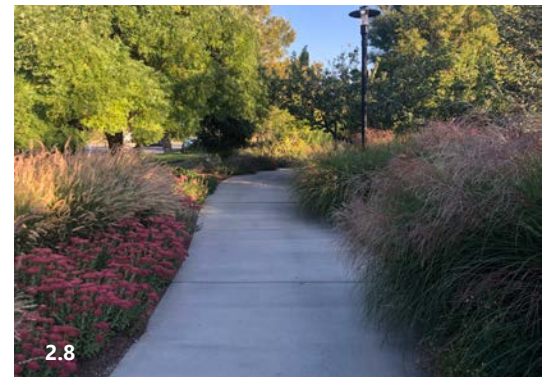
Another great challenge was planting design. In one portion of the garden, shade trees were planted next to xeric plants that required full sun. It was not an issue until the shade trees reached mature size and blocked out the sun! The plants below died and had to be replaced with shade-tolerant landscaping.

### Successes

The greatest success of this garden is the clear demonstration that landscape design can be beautiful and sustainable. They are not mutually exclusive attributes. Strive to make your design beautiful and environmentally conscious, too!



2.7



2.8

2.6 Mature Honeylocust trees cast shade over a walkway.

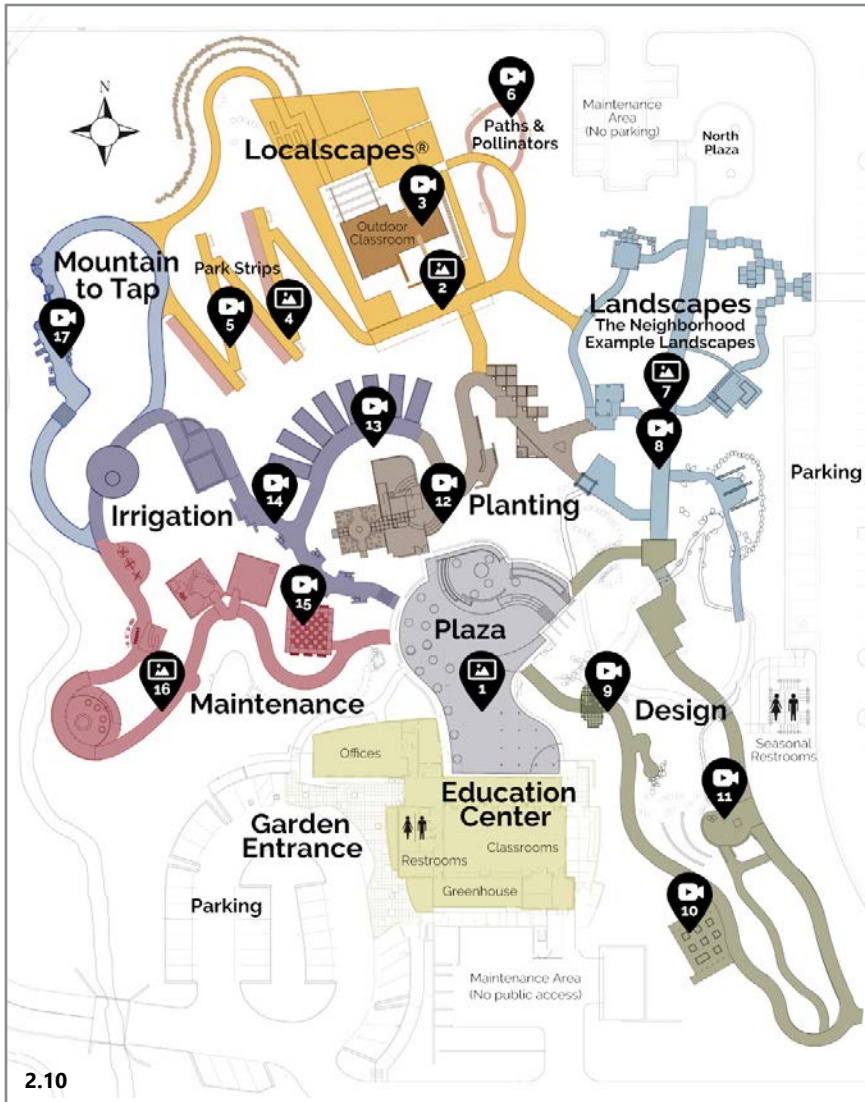
2.7 An irrigation display shows how to arrange sprinkler heads.

2.8 Low-water grasses and flowers give definition to a winding path.

2.9 A small gathering area shows a mix of in-ground and potted plants.



2.9



2.10 A simplified site plan showing the seven different demonstration gardens as well as the plaza, education center, and garden entrance.

## Expert Tips for Your Outdoor Classroom

### 1. Plan for Maintenance

Maintenance can be very difficult if paths are not large enough to grant access to maintenance vehicles. Consider how and who will maintain the site when you design!

### 2. Choose Utah-native and Water Wise Plants

Utah's dry climate has difficulty supporting turf grasses (lawn) and plants that require a lot of water without extensive irrigation. Utah-native and water wise plants are more likely to survive in seasons of drought than other species. These plants can also provide place-based teaching opportunities in your outdoor classroom and help educate students about environmental sustainability.

### 3. Remember Mature Size in Planting Design

When selecting and placing plants, remember that the mature size can be much larger than the size at installation. If plant growth is not carefully considered, it can cause problems down the road.

## Resources

### Water Wise Plant Database

<https://conservationgardenpark.org/plants>

### Pre-made Planting Plans

<https://conservationgardenpark.org/readymadeplans>

### Virtual Tour

<https://conservationgardenpark.org/visit/parkmap>

### Facebook Page

<https://www.facebook.com/ConservationGardenPark>

### Contact

Shaun Moser – Conservation Garden Manager  
[shaunm@jwcd.org](mailto:shaunm@jwcd.org)

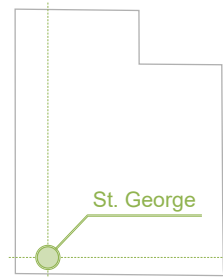


# NATURE CENTER

pond | kids | wildlife | outdoor classrooms | trails

## Tonaquint Nature Center

The Tonaquint Nature Center is an outdoor education-focused appendage to Tonaquint Park in St. George, near the Santa Clara River. It includes a series of ponds, walking trails, and outdoor classrooms, and it is a popular destination for viewing wildlife. It was built and managed by the city, along with a great volunteer effort from the community. A variety of nature-based events and classes are offered year-round by volunteers from the Red Cliffs Desert Reserve, the BLM, and the DWR. Each year, over 1,600 students visit the nature center to attend these classes! The nature center is free, open to the public, and it is a popular place for families, photographers, joggers, and bikers to come and pass the time. It is a beautiful natural refuge in the heart of a rapidly growing city.



### Quick Facts

<b>Location</b> St George, UT	<b>Size</b> 10 Acres	<b>Designed</b> 1995	<b>Constructed</b> Incremental	<b>Total Cost</b> N/A
<b>Context</b> Cemetery + Park Near Santa Clara River	<b>Landscape Architects</b> JW Zunino Landscape Architecture	<b>Consultants</b> Shade Tree and Beautification Board	<b>Client</b> St. George City	<b>Key Features</b> Duck Pond Amphitheater Walking Trails



3.1



3.2



3.3

3.1 An outdoor amphitheater provides space for larger groups to gather. Amphitheaters should be aligned N/S so that sun doesn't shine in anybody's eyes.

3.2 An outdoor classroom area built by volunteers for an eagle scout project.

3.3 Exposed drip irrigation shows through the leaves, hinting that this space is planted, not natural.

3.4 An outdoor classroom gathering area that could be improved with natural seating (e.g., boulders, logs, stumps, etc.)

## Inspirational Ideas

### Natural-looking Landscape

The trees and plantings throughout the nature center appear to be a natural part of the river-edge habitat. However, if you look closely, you'll notice signs of irrigation. You can recreate natural environments by choosing native plant species and mimicking their natural arrangements.

### Space

The typical number of students for classes at the nature center is 20-25. They need roughly a 25'x25'-30'x30' space with seating to accommodate groups of this size. Size your outdoor classroom appropriately for the groups that will use it.

### Incremental Growth

Great facilities like this don't have to be master planned and installed in one great, expensive effort. Many of the trails, plantings, and outdoor classroom areas at the Tonaquint Nature Center were built incrementally as grant funding and volunteers became available.



3.4



## Expert Tips for Your Outdoor Classroom

### 1. Program for All Seasons

Outdoor classrooms are easy to use when the weather is comfortable and people are eager to spend time outside. Unfortunately, that doesn't happen every day of the year—especially in Utah! Consider how your outdoor classroom can be used in all seasons. You may want to include a shade structure or sheltered area to protect students on hot or cold days.

### 2. Get Volunteer Help

Many parts of the nature center's outdoor classrooms were designed and installed by volunteers. Eagle Scout projects and annual Arbor Day tree planting events are a few good opportunities to get volunteer help. Reach out to local non-profits and volunteer groups to get help with the design and build of your outdoor classroom.

### 3. Avoid Noisy Areas

Noise can be a distraction in the uncontrolled environment of outdoor classrooms. Locating your outdoor classroom in an intimate location will help reduce that distraction. Try to provide at least 75' of distance between your classroom and any nearby areas of human activity. If that is not possible, use a screening element (like large shrubs or a fence) to help muffle the sound.



3.5 A wooden arbor or pergola can be used to beautify an area as well as provide shade.

3.6 A bike/jogging trail borders the nature center. Outdoor classrooms are located far from these noisy spaces.

## Resources

Nature Center Website  
<https://www.sgcity.org/tonaquinnaturecenter/>

## Contact

Dawn Eide-Albrecht - Recreation Center Manager  
[dawn.albrecht@sgcity.org](mailto:dawn.albrecht@sgcity.org)



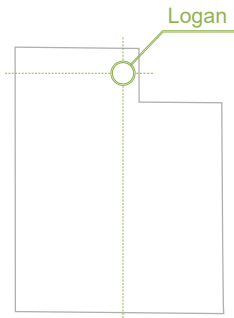


# NATURE PRESCHOOL

river | canyon | trail | outdoor | preschool

## Stokes Nature Center + Preschool

The Stokes Nature Center is a unique non-profit organization and preschool on Forest Service land in Logan Canyon. It began when a local teacher named Jack Greene was inspired by place-based environmental teaching at the Teton Science School in Wyoming. He, along with members of the First Presbyterian Church and the Bridgerland Audubon Society, decided to establish a nature center to promote environmental education in Cache Valley. Many volunteers contributed time, talents, and materials to help the nature center come to life in 1996. In 2014, a nature preschool was added to the center. Now, supported by an 11-person staff and numerous volunteers, the center hosts 10,000-12,000 program attendees and 4,000+ visitors per year. With continued growth and funding, they have plans to add another outdoor classroom location in Nibley, UT.



### Quick Facts

<b>Location</b> Logan, UT	<b>Size</b> 0.7 Acres	<b>Designed</b> 1990's	<b>Constructed</b> 1996	<b>Total Cost</b> All Volunteer + Donation
<b>Context</b> Canyon Trail Along Logan River	<b>Landscape Architects</b> Bio-West Inc	<b>Consultants</b> Bio-West Inc	<b>Client</b> Stokes Nature Center	<b>Key Features</b> Outdoor Preschool Nature Trail River Access



4.1



4.2



4.3

4.1 A wood fence mitigates risk by allowing for supervised access to the river at a single point.

4.2 A bird-feeder highlights the natural elements of the site by attracting wildlife.

4.3 Instead of an expensive pre-fabricated play element, logs and other tree debris are gathered to make a natural fort for children to explore.

4.4 Wood from felled trees is preserved for various seating applications. An old canoe is cut and up-cycled into a preschool play element.



4.4

## Inspirational Ideas

### Design Philosophy

The Stokes Nature Center operates under the philosophy that design should not replace the natural elements of the site, but rather, it should emphasize and supplement them. Pursuing this philosophy will require care and detail when conducting an inventory of your site.

### Material Up-Cycling

This center has sought to be innovative in their approach to material use through up-cycling. One example is an old canoe that was cut in half and installed near the sandbox to act as a play element for the preschool.

### Capitalize on Risks

Some features of the nature center's outdoor classroom site, like the river or poison ivy, could be considered risks or safety hazards for students. Rather than removing these risky elements, the center places safety barriers and uses those elements as teaching opportunities to help students learn to be safe on their own.



## Expert Tips for Your Outdoor Classroom

### 1. Design in Phases

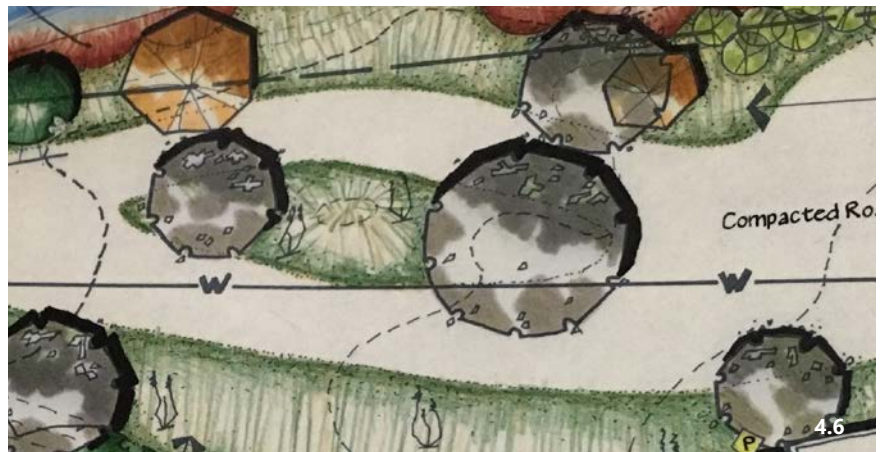
Depending on your design, you may not be able to procure enough funding to complete your whole plan at once. Group parts of your design and prioritize them for when funding becomes available. If you can show success with the first phase of your design, you'll have more credibility for finding funding in the future!

### 2. Partner With Other Organizations

You'll be much more likely to obtain grant funding if you can show that your design will benefit more than just your own organization. Try to find other non-profit or local community groups with whom to partner that could benefit from using your site. You may also consider planning to keep your site open for public use.

### 3. Preserve Existing Features

You can achieve a unique, site-specific aesthetic for your outdoor classroom by preserving the existing features of your site. Preserving existing features will also save on construction time and material costs.



4.5 A portion of the site plan drawn by Bio-West that guided the construction of this site.

4.6 A portion of the plan showing careful inventory of the site before design.

## Resources

Stokes Nature Center Website  
<http://logannature.org/>

Contact  
 Patrick Kelly - Director of Education  
[education@logannature.org](mailto:education@logannature.org)

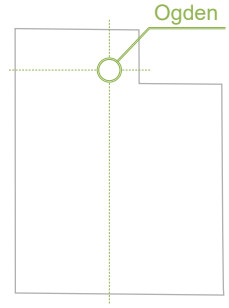


# PUBLIC PARTICIPATION

community engagement | design process | education | schoolyard

## Greenwood Charter School "The Back Seven"

Greenwood Charter School's "The Back Seven" is a seven-acre parcel of old agricultural land owned by the school. Though a previous design had been proposed for the site, Greenwood reached out to Utah State University's (USU) Landscape Architecture Extension Office for help re-designing the space. They used public participation in the design process to ensure that the new plan would better suit the needs of the students and teachers. After gathering public input through surveys, Greenwood took the process to a new level by instituting a landscape design class for their 7th-8th grade students. The students worked together and followed the 2021 Utah Outdoor Classroom Design Guide to create concept plans and a refined schematic site plan for The Back Seven. They will be able to use their site plan to apply for grant funding on small projects for years to come.



### Quick Facts

Location Ogden, UT	Size 7 Acres	Designed 2021	Constructed Future	Total Cost Volunteer Design
Context Charter School Near Agricultural Land	Landscape Architects N/A	Consultants Utah State University's LAEP Extension Office	Client Greenwood Charter School	Key Features Student Design Experiential Learning Community Engagement



5.1



5.2

## Public Participation

A common element in outdoor classroom design guides across the nation is public participation. If your outdoor classroom involves multiple stakeholders, reach out to them and involve them in the process. This will help you know what to include in your design, based on the needs of the users.

### Conduct a Survey

A simple survey is a great way to quickly collect input from any stakeholders. You can easily create and distribute a free survey through Google forms. You can also make a free QR code for people to access the survey by phone.

### Advertise on Social Media

If your organization has a social media account like Facebook, Instagram, or Twitter, post information about your design and ask for comments. This is an easy and convenient way to reach people and will require little effort on their part.

### Advertise at School Events

People are not likely to come out to a community engagement event that is just focused on designing an outdoor classroom. Instead, advertise your outdoor classroom at existing school events, like a parent's night, a school dance, or a sporting event.



5.3

5.1 An interactive table is setup at Greenwood's Parent's Night to advertise The Back Seven project and gather public input.

5.2 A flier with a QR code linked to the survey was hung around the school in various locations.

5.3 A poster showing the design process was displayed at the various tabling events at Greenwood.



5.4



5.5



5.6



5.7

5.4 A student from USU teaches Greenwood students about conceptual site design.

5.5 Greenwood students work in groups to draw a conceptual site plan.

5.6 A closeup example of schematic design graphics.

5.7 A professor in the Landscape Architecture Department at USU demonstrates graphic representation for schematic design to Greenwood students.

5.8 A conceptual site plan with labels created by Greenwood students for their schoolyard.



5.8

### Student Design

Students are the primary users of an outdoor classroom. As such, they are the experts on what should be included to help capture their attention and make a meaningful place.

### Concept Design

After writing down some observations about their school grounds and reviewing information from the public input surveys, the students formed groups and created several conceptual site plans for their schoolyard. They produced a variety of quick sketch ideas to explore their options.

### Schematic Design

Once they agreed on an overall concept plan, they broke up the schoolyard into several small pieces and created detailed schematic designs for each area. Then the designs were compiled together to form the overall schematic site plan.

### Collaboration with USU

Volunteer faculty members and students from USU helped guide the landscape design class at Greenwood throughout the semester. They organized design lessons, a graphics workshop, design critiques, and a field trip to USU for Greenwood students to observe the grounds and the Landscape Architecture department.

## Expert Tips for Your Outdoor Classroom

### 1. Use Everyone's Ideas

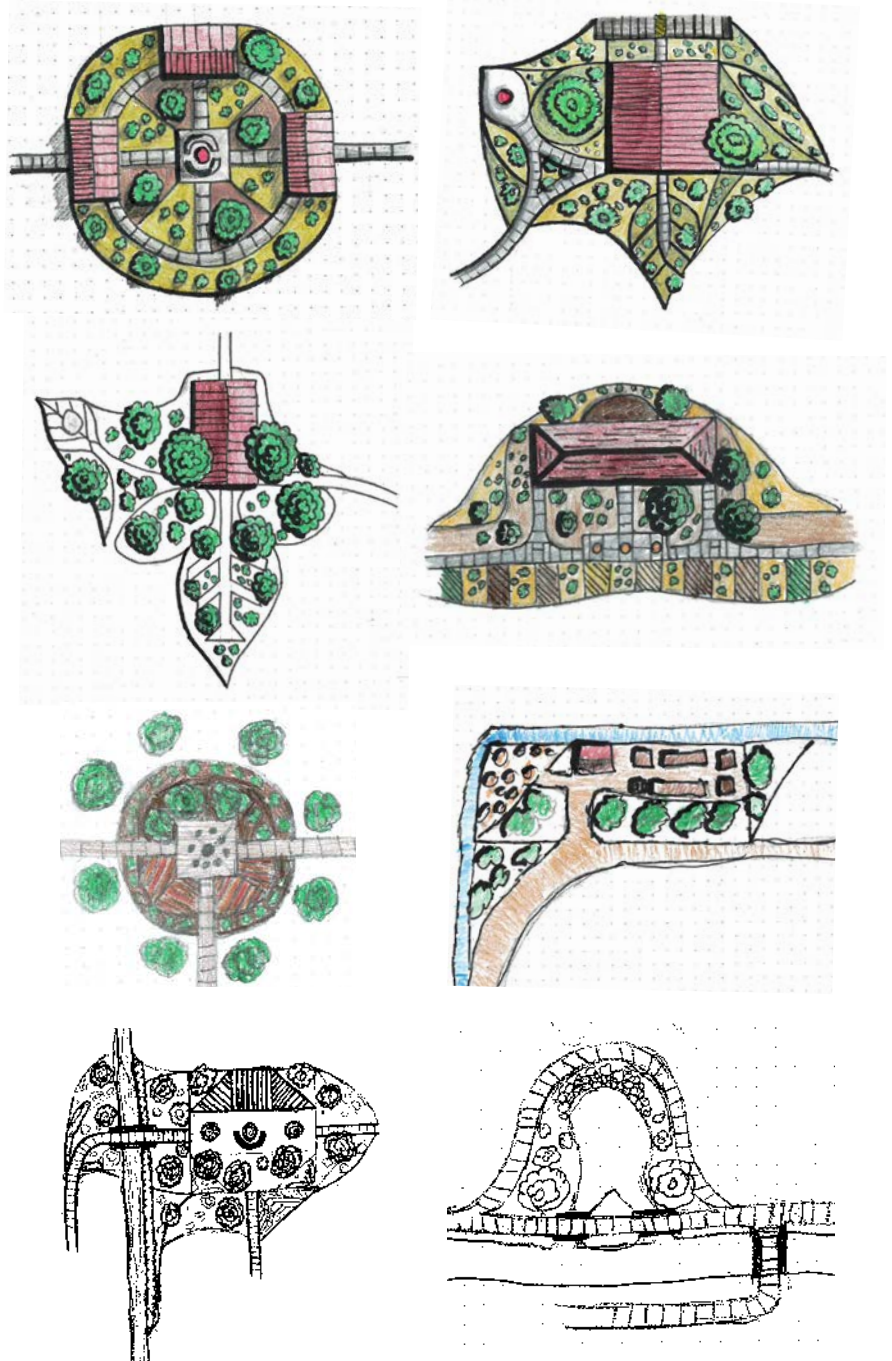
Collaboration means compromise. Everyone involved in the process should have their ideas included in some way.

### 2. Invite Social/Emotional Learning

Designing a site plan with a team may involve some emotional peaks and valleys. Invite social and emotional learning by exercising patience when conflict arises and celebrating when compromise is reached and ideas come together.

### 3. Set and Meet Deadlines

Design is a creative exercise that can take up a lot of time if you don't include constraints. Set deadlines for each phase of the design process and do your best to meet them. You may need to be flexible as you learn, but progress and satisfaction will come as you strive to stay on schedule.



▲ A selection of site plans designed and drawn by students in Greenwood's landscape design class.

## Resources

Flier/Poster Layout Website  
<https://www.canva.com/>

Google Forms for Survey  
<https://www.google.com/forms>

QR Code Generator  
<https://www.flowcode.com/>

Contact  
Diana Sciandra - Greenwood Landscape Design Teacher  
[dsciandra@greenwoodcharter.org](mailto:dsciandra@greenwoodcharter.org)

# Case Study Takeaways

## Top 15 Tips From Experts in Utah

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- |   |   |   |
|---|---|---|
| Wasatch<br>Community<br>Gardens' Campus | } | 1. Define Your Vision                       |
|   |   | 2. Assemble a Team                          |
|   |   | 3. Be Flexible                              |
| Conservation<br>Garden Park             | } | 4. Plan for Maintenance                     |
|   |   | 5. Choose Utah-native and Water Wise Plants |
|   |   | 6. Remember Mature Size in Planting Design  |
| Tonaquint<br>Nature Center              | } | 7. Program for All Seasons                  |
|   |   | 8. Get Volunteer Help                       |
|   |   | 9. Avoid Noisy Areas                        |
| Stokes<br>Nature Center                 | } | 10. Design in Phases                        |
|   |   | 11. Partner With Other Organizations        |
|   |   | 12. Preserve Existing Features              |
| Greenwood<br>Charter School             | } | 13. Use Everyone's Ideas                    |
|   |   | 14. Invite Social/Emotional Learning        |
|   |   | 15. Set and Meet Deadlines                  |

## Glossary of Terms

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### Concept Design

The first phase of design. This consists of drawing several iterations of loose bubble arrangements.

### Concept Plan

A site plan drawn at a conceptual level of detail (e.g., bubbles with labels and notes).

### Program (Activity)

An activity or event planned to take place in a certain space.

### Program (Design)

A list of desired features that should be included in a site plan in all phases of design (e.g., bench, table, pavilion, trees, paths, etc.).

### Program Element

A specific feature in the design program for a site (e.g., a pavilion).

### Site Analysis

A pre-design activity focused on making critical judgments on information gathered from the site inventory for the purpose of informing design decisions.

### Site Inventory

A pre-design activity focused on observing and taking note of information on a given site. This information can be drawn on a map or written down as notes.

### Site Plan

A proposed design drawn onto a map in plan (aerial) view at any level of detail.

### Schematic Design

The second phase of design. This consists of adding detail and graphic refinement to a concept plan.

### Schematic Plan

A site plan drawn at a schematic level of detail (e.g., tree symbols, defined paths, material textures, color, shadows).

### Water Wise

This term describes landscaping techniques and landscape elements or plants that use little water (synonymous with xeric).

### Xeric

This term describes landscaping techniques and landscape elements or plants that use little water (synonymous with water wise).

## Additional Suggested Case Studies

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The Garden on Spring Creek - Fort Collins, CO

<https://www.fcgov.com/gardens/our-gardens>

The Riverwalk - Pueblo, CO

<https://www.puebloriverwalk.org/>

Waterford Elementary - Sandy, UT

<https://waterfordschool.org/academics/preschool/prek-outdoor-classroom>



## **CHAPTER 4**

# **Additional Resources**

# Additional Resources

## Websites



Natural Learning Initiative

- Services
- Design Assistance
  - Case Studies
  - Example Site Plans
  - Gardening Activity Guide



Nature Explore

- Services
- Outdoor Classroom Product Catalog
  - Outdoor Classroom Certification
  - Design Consultation
  - Fundraising Resources



Playcore Resources

- Services
- Plant List Creator
  - Plant Use Information for Play Spaces
  - Play space Design Recommendations
  - Funding Search Tool



Utah Core Education Standards

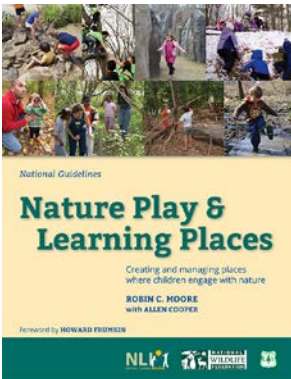
- Services
- List Core Education Objectives for All Grade Levels
  - Lesson Ideas for the Outdoor Classroom



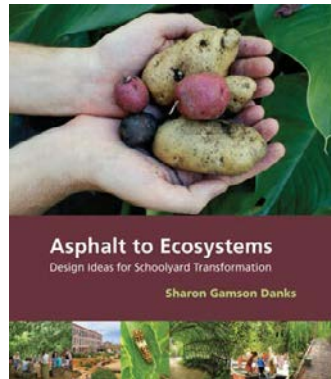
NPS Tips for Outdoor Classrooms

- Services
- Tips on Using an Outdoor Classroom Effectively
  - 1st-6th Grade Curriculum Materials

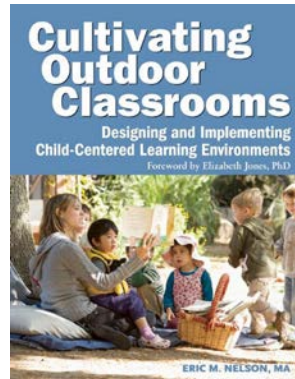
## Recommended Books



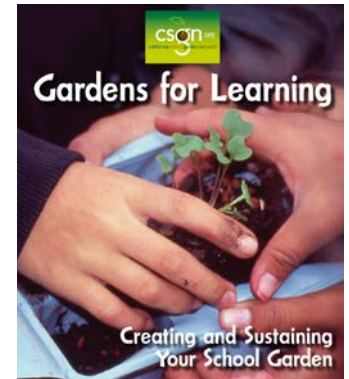
Nature Play & Learning Places  
Robin Moore & Allen Cooper  
(2014)



Asphalt to Ecosystems  
Sharon Danks  
(2010)



Cultivating Outdoor Classrooms  
Eric Nelson  
(2015)



Gardens for Learning  
California School Garden Network  
(2006)

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## Moving Forward...

The site plan and narrative you have created is used to communicate the basic elements of your design to the grant selection committee. If your project is selected for funding, you will likely need to further refine and establish the details of your design. This may require working with qualified landscape architects, engineers, and/or contractors to ensure the efforts to transform your design into reality will be high quality, long lasting, will follow applicable building codes, and be safe for the students and teachers it serves.

Additional design help from the USU Landscape Architecture and Environmental Planning department may be available upon request. To inquire about further design assistance, visit the LAEP Extension website and click "Request Our Help."

*Note: Design help service is on a first-come-first-serve basis and will not be guaranteed to all participants.*



## Governor's Office of Economic Opportunity

UTAH OFFICE OF OUTDOOR RECREATION



College of Agriculture & Applied Sciences  
UtahStateUniversity



Extension  
UtahStateUniversity



This document was created at the request of the Utah Office of Outdoor Recreation in partnership with Utah State University Extension and the Department of Landscape Architecture and Environmental Planning at Utah State University.

# **EXECUTIVE SUMMARY**

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# **Developing and Piloting a Design Guide for Outdoor Classrooms in Utah**

**DEREK JENSON**

*MLA 2022*

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**THESIS COMMITTEE**

*Jake Powell*

*David Anderson*

*Rose Judd-Murray*



# EXECUTIVE SUMMARY

Developing and Piloting a Design Guide for Outdoor Classrooms in Utah

## Project Background

The aim of this project was to create an outdoor classroom design guide that was simple enough for beginner-level designers to follow and thorough enough to help produce quality design. The design guide is targeted towards grant applicants applying for the Utah Outdoor Classroom Grant but can be used by anyone interested in designing an outdoor classroom. The first edition of the design guide was distributed in January of 2021 as a pilot project to establish a basic resource for grant applicants. It was distributed to grant applicants throughout the state, and feedback was collected from the users to identify accessibility barriers and areas for improvement. Several case studies in Utah were conducted and added to the guide. After a year of study and editing, the updated Utah Outdoor Classroom Design Guide was distributed online through the Office of Outdoor Recreation. The updated guide now reflects a structured design process focused on public participation. It also features a variety of tools to help streamline the process, including a sample survey, worksheets, and an additional resources section.

## Why Create an Outdoor Classroom?

Outdoor classrooms are often associated with schools, but they exist in a variety of settings, including community gardens, childcare centers, playgrounds, parks, and at other community facilities. Several studies have demonstrated health, social, and educational benefits of using outdoor classrooms for both students and teachers (Funnell et al., 1997; Kuo et al., 2018; Lieberman and Hoody, 1998; Meighan & Rubenstein, 2018; Minero, 2018; Suttie, 2018). Outdoor classrooms have an exceptional ability to support place-based learning and environmental education (Sobel, 2017). They provide an additional layer of experiential learning to enhance the subject matter of nearly any curriculum. Though they can be limited by factors such as inclement weather and unpredictable sound interference, they are still powerful tools that teachers can use to support their educational goals. Outdoor classroom projects can also be tools for community building and to help foster strengthened relationships among community members.

As understanding and awareness of the benefits of outdoor classrooms has increased, organizations nationwide have established grants to help encourage their implementation. In 2021, the Utah Office of Outdoor Recreation established the Utah Outdoor Classroom Grant, which provides over \$150,000.00/year in matching funds for the construction of outdoor classrooms across the state. Individual applicants can qualify for up to \$10,000.00 of those funds, depending on the scope of their project.

## Public Participation – A Fundamental Piece

Experts consistently emphasize that public participation is the key to creating successful outdoor learning environments (Danks, 2010; Moore & Cooper, 2014; Moore & Wong, 1997; Olds, 2001; Stine, 1996; Sobel, 2017; Nelson, 2015). However, engaging the community takes planning, time, and resources. Is it worth the additional required effort? Olds (2001) states, “Because collaboration requires dialogue and consensus among people with varied agendas and expertise, it can be difficult, cumbersome, and time-consuming. But failure to institute a process with a diversified, representative approach has been the single greatest factor in creating facilities that do not support the needs of children, even where projects are well funded. A good team always includes both childcare and design professionals, as well as management, building professionals, and representatives of regulatory agencies.”

Moore and Wong (1997) reaffirm that “Collectively, the community had knowledge that no outside expert could ever acquire independently. The best thing to do was to collaborate with the community in the development process. The ultimate aim of this process was educational, to help people learn how to control their own environment and design it to suit their own purposes.” Public participation is a fundamental tool by which design is enhanced and people are educated—effectually becoming better stewards of their own land. This is especially important in an outdoor classroom setting where the construction and care of the facility generally rely on donated materials and volunteer labor.

## Case Studies

Utah has several great outdoor classroom facilities throughout the state. To shed light on these existing facilities, five case studies were conducted in diverse locations across the state. Francis (2001) suggests that one purpose for conducting case studies on landscape architecture projects is to bring to light examples that are worthy of replication. The various case study locations were selected with that idea in mind as well as for their accessibility. Each of the case studies are free and open to the public, so anyone can visit them. They each have supplemental online resources, in case someone is unable to visit them in person. The locations of the selected case studies are:

1. Wasatch Community Gardens' Campus – Salt Lake City
2. Conservation Garden Park – West Jordan
3. Tonaquint Nature Center – St. George
4. Stokes Nature Center - Logan
5. Greenwood Charter School - Ogden

Details about these case studies can be found in Chapter Three of the full design guide.

## Applied Case Study – The Back Seven at Greenwood Charter School

“The Back Seven” is a seven-acre parcel of former agricultural land owned by Greenwood Charter School in Ogden, UT. For years, students have loved exploring this area and viewing its natural plants and wildlife. However, The Back Seven had not yet realized its capacity as an educational tool and recreational resource. Although The Back Seven already had a landscape plan in the past, it did not adequately serve the needs of the students and teachers and was never implemented. The students and teachers at Greenwood set out to solve that problem by creating a new design for themselves!

It began when Diana Sciandra, a teacher at Greenwood Charter School, reached out to Utah State University’s Landscape Architecture Extension Office for help with creating a new landscape plan for their schoolyard. This presented an opportunity to apply the Utah Outdoor Classroom Grant Design Guide to a real outdoor classroom design project, test its validity, and make adjustments to the guide based on observations in the process. To accompany this thesis project and help test the guide, Diana initiated a 7th-8th grade landscape design class in the fall of 2021. The class curriculum was based on the process outlined in the first edition of the Utah Outdoor Classroom Grant Design Guide document and incorporated public participation and student involvement.

The students used the design guide to gather public input from other students, parents, and teachers, and to produce a plan that would incorporate many different ideas. They created several conceptual plans in small groups, then came together as a class and decided upon one ideal concept plan to present to the school board. After the concept plan received feedback and approval, they moved into the schematic design phase and helped produce a final landscape plan. Their involvement in the project gave them a sense of ownership over the site and serves as an example of what can be accomplished in other parts of the state.





1.1 A student from USU teaches Greenwood students about conceptual site design.

1.3 A conceptual site plan with labels created by Greenwood students for their schoolyard.

1.2 Greenwood students work in groups to draw a conceptual site plan for The Back Seven.

1.4 A schematic site plan that served as the final product for the interaction between Greenwood and USU.



1.4

## "THE BACK SEVEN" LANDSCAPE PLAN

# The Utah Outdoor Classroom Grant Design Guide

As a result of the various studies, the Utah Outdoor Classroom Grant Design Guide was updated and distributed to grant applicants for the 2022 funding cycle. The new guide is digitally interactive and is hosted on the Utah Office of Outdoor Recreation Outdoor Classroom Grant website. It is organized into four chapters, as follows:

1. The first chapter contains a step-by-step design process that will help readers produce a site plan necessary for the grant application. The process was tested by students at Greenwood Charter School and updated based on observations of their work. Since the guide is digitally interactive, it also allows people to take notes throughout the process.
2. The second chapter offers a set of digital and printable worksheets, including scaled base grid sheets to draw on, a scaled bubble diagram cutout page for concept exploration, and a sample survey to help encourage public input and participation in the process. All of the worksheets are intended to be printed for use, but the sample survey comes with a web link that can be used to send it out digitally as well.
3. The third chapter showcases the five different outdoor classroom case studies from various parts of the state. Each case study contains pictures and descriptions of unique or inspirational features of the site, a set of expert tips from the facility managers, and a set of additional resources where readers can go to for more information about the sites. All facilities included in the case studies are free and accessible to the public both in-person and online.
4. The fourth and final chapter highlights additional resources to give more support. This includes information about five national organizations that promote outdoor classrooms, four recommended books about designing and managing outdoor classroom spaces, and web links to useful resources like outdoor classroom product catalogs, plant species libraries, and help request forms for volunteer design consultation.

Though the guide is not comprehensive, it provides a strong foundation for guiding the design of outdoor classrooms in Utah and makes available additional resources in other parts of the nation. This project, and others like it, will help support the teachers, non-profit leaders, and anyone else interested in initiating outdoor classrooms at their own facility. This guide is intended to be a resource to support the Utah Outdoor Classroom Grant for years to come.

## REFERENCES

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- Booth, N. K., & Hiss, J. E. (1991). *Residential landscape architecture: Design process for the private residence* (7th ed.). Prentice Hall.
- Bucklin-Sporer, A., & Pringle, R. K. (2010). *How to grow a school garden*. Timber Press.  
[https://scholar.google.com/scholar\\_lookup?title=How+to+grow+a+school+garden&author=Bucklin-Sporer%2C+Arden.&publication\\_year=2010](https://scholar.google.com/scholar_lookup?title=How+to+grow+a+school+garden&author=Bucklin-Sporer%2C+Arden.&publication_year=2010)
- California School Garden Network. (2006). *Gardens for learning: Creating and sustaining your school garden*. California School Garden Network.
- Center for Ecoliteracy, & Barlow, Z. (2009, October 29). Getting started: A guide for creating school gardens as outdoor classrooms. Ecoliteracy.org. Retrieved January 2022, from <https://www.ecoliteracy.org/download/getting-started-school-gardens>
- Danks, S. G. (2010). *Asphalt to ecosystems: Design ideas for schoolyard transformation*. New Village Press. Retrieved from Google Books.
- Ferreira, M. M., Grueber, D., & Yarema, S. (2012). A community partnership to facilitate urban elementary students' access to the outdoors. *School Community Journal*, 22(1), 49–64.  
<https://files.eric.ed.gov/fulltext/EJ974685.pdf>
- Forests Ontario & TD Friends of the Environment Foundation. (n.d.). TD Building Outdoor Classrooms | Forests Ontario. Forestsontario.ca. Retrieved January 2022, from <https://forestsontario.ca/en/resource/td-building-outdoor-classrooms>
- Francis, M. (2001). A case study method for landscape architecture. *Landscape Journal*, 20(1), 15–29. <https://doi.org/10.3368/lj.20.1.15>

Funnell, K., Alford, V., Denegri, D., Johns, S., Young, B., Lucas, B., Titman, W., & Wood, J. (1997). *School Grounds: A Guide to Good Practice*. Building Bulletin 85. HMSO

Publications Centre, P. <https://eric.ed.gov/?id=ED431294>

Growing Gardens Team & Albuquerque Public School District. (2014, September). *Growing the outdoor classroom: A handbook on gardening in Albuquerque Public Schools*. APS.

Retrieved January 2022, from <https://www.aps.edu/coordinated-school-health/school-gardens/documents/aps-school-gardens-manual>

Johnson, L. M., Duffek, K., & Richards, J. (2008). *Creating outdoor classrooms: Schoolyard habitats and gardens for the Southwest*. University of Texas Press.

Jørgensen, K., Karadeniz, N., Mertens, E., & Stiles, R. (Eds.). (2019). *The Routledge handbook of teaching landscape*. Routledge. <https://doi.org/10.4324/9781351212953>

Kimbro, C. C. (2010). *W113-Developing an Outdoor Classroom to Provide Education Naturally*. TRACE: Tennessee Research and Creative Exchange.

[https://trace.tennessee.edu/utk\\_agexenvi/29/](https://trace.tennessee.edu/utk_agexenvi/29/)

Kuo, M., Browning, M. H. E. M., & Penner, M. L. (2018). Do Lessons in Nature Boost Subsequent Classroom Engagement? Refueling Students in Flight. *Frontiers in Psychology*, 8. <https://doi.org/10.3389/fpsyg.2017.02253>

Lieberman, G. A., & Hoody, L. L. (1998). *Closing the Achievement Gap: Using the Environment as an Integrating Context for Learning. Results of a Nationwide Study*. ERIC, 1–10. <http://www.seer.org/extras/execsum.pdf>

Marcus, C. C., & Francis, C. (1997). *People places: Design guidelines for urban open space*. John Wiley & Sons.

- Meighan, H. L., & Rubenstein, E. D. (2018). Outdoor learning into schools: A synthesis of literature. *Career and Technical Education Research*, 43(2), 161–177.  
<https://doi.org/10.5328/cter43.2.161>
- Minero, E. (2018, March 2). *The architecture of ideal learning environments*. Edutopia.  
<https://www.edutopia.org/article/architecture-ideal-learning-environments>
- Moore, R. C., Cooper, A., Frumkin, H., & United States Forest Service. (2014). *Nature Play & Learning Places*. Natural Learning Initiative.
- Moore, R. C., & Wong, H. H. (1997). *Natural Learning: The life of an environmental schoolyard. Creating environments for rediscovering nature's way of teaching*. MIG Communications.
- National Research Council, Board on Science Education, Center for Education, & Division of Behavioral and Social Sciences and Education. (2010). *Surrounded by Science: Learning Science in Informal Environments* (H. A. Schweingruber & M. Fenichel, Eds.; Illustrated ed.). National Academies Press.
- Nature Explore. (2020, September 4). Outdoor classroom design process.  
<https://natureexplore.org/outdoor-classroom-design-process/>
- Nelson, E. (2015). *Cultivating outdoor classrooms: Designing and implementing child-centered learning environments*. Saint Paul: Redleaf Press. Retrieved from ProQuest Ebook Central.
- Olds, A. R. (2001). *Child care design guide*. McGraw-Hill, P. Retrieved from ERIC
- Salama, A. M. (2013). Seeking responsive forms of pedagogy in architectural education. *Field*, 5(1), 9–30.
- Sobel, D. (2017). *Place-based education: connecting classrooms and communities*. Retrieved from Open WorldCat.

Stine, S. (1996). *Landscapes for learning: Creating outdoor environments for children and youth*. John Wiley & Sons. Retrieved from Google Books.

Suttie, J. (2018, May 14). *The Surprising Benefits of Teaching a Class Outside*. Greater Good Science Center.

[https://greatergood.berkeley.edu/article/item/the\\_surprising\\_benefits\\_of\\_teaching\\_a\\_class\\_outside](https://greatergood.berkeley.edu/article/item/the_surprising_benefits_of_teaching_a_class_outside)

Utah Division of State History. (2019). *Utah Office of Outdoor Recreation*. History.Utah.Gov.

<https://history.utah.gov/repository-item/utah-office-of-outdoor-recreation/>