Painted Play Spaces: Playground Assessment and Planning Toolkit

Developed through a partnership with the University of Central Oklahoma for Project SWITCH, a Centers for Disease Control (CDC) funded project.

Mission of Painted Play Spaces

The mission of Painted Play Spaces is to enhance the play environments at schools by using colorful paint and stencils to create an array of recess games on existing hardscapes to increase physical activity and student engagement on school campuses.

Introduction

Physical activity is an essential part of keeping students healthy and active. Research shows that physical activity helps students mentally decompress and refocus once they reenter the classroom. Also, through play, students develop communication and social skills, both vital parts of education.

This toolkit has been designed to assist schools with implementing painted play spaces on school campuses. There are three phases to implementing painted play spaces: design phase, preparation phase, and implementation phase. This toolkit supports schools with the design and preparation phases of implementing painted play spaces. The implementation phase is supported by the Painted Play Spaces: Playbook of Recess Games which provides the descriptions, directions, and rules for the recess games outlined in this document.

Guidance for the design phase includes instructions for the design layout of the selected space(s) and steps for ensuring the area is safe for students. The toolkit also provides a proposed timeline for organizing for and implementing a painted play space.

Checklists for identifying and designing the selected play space is included in this toolkit for support. The “Checklist for Safety Assessment” will help identify suitable play areas with unobstructed views of students and to identify spaces free of hazards. The “Checklist for Design” provides a step-by-step process to determine the layout of the selected space. Following the completion of the provided checklists, it is recommended to proceed with the “Timeline to Organize the Painting Event” to begin the preparation phase. This timeline will assist with ordering and organizing paint and supplies, recruiting and volunteers, and stencil usage. The preparation phase and following the timeline provided is critical for successful project completion.
# Table of Contents

Mission Statement ................................................................. 1  
Introduction ........................................................................... 1  
Explanation of the Design and Preparation Phases ................. 1  
Table of Contents ................................................................... 2  
Design Phase ........................................................................... 3  
  Checklist for Safety Assessment ........................................... 3  
  Checklist for Design ............................................................. 3  
      Develop a Sketch ............................................................... 4  
      Prepare a Scale Drawing .................................................. 5  
      Option #1: Digitally ......................................................... 5  
      Option #2: By Hand ......................................................... 5-7  
  Select the Activities ......................................................... 7-10  
Preparation Phase .................................................................. 11  
  Timeline to Organize the Painting Event ............................ 11-12  
  How to Paint the Stencils ..................................................... 12-13
Design Phase

Checklist for Safety Assessment
Safety is a priority when planning for a painted play space. Creating a safe play environment is an essential aspect for children’s development, learning, and engagement levels. Use the questions on the checklist to identify suitable play areas to enable active supervision, identify spaces free of hazards, organize the equipment and play space to ensure social distancing, and examine possible accommodations.

- Do the adults monitoring the play space have unobstructed views of all students?
- Are there any areas or hazards that need to be addressed or avoided?
- Can students maintain social distancing protocols when playing or waiting?
- Could an alternate recess schedule to limit the numbers of students work?
- Could the play space be divided into zones?
- If so, could each zone have painted games on the blacktop or sidewalks that require no or limited equipment?
- If zones were utilized, would students be assigned to play zones, or could a rotation be developed after a certain amount of play time?
- Could rotation and line up procedures be practiced to ensure social distancing?
- Is the play area’s surface safe and clean of debris?
- Can students engage in physical, sensory, and social play?
- Can everyone easily maneuver through the play area?
- Can children who use mobility devices move to and from the activities?
- Does the activity provide enough challenge for students?
- How is the equipment grouped or limited?
- Is social distancing possible?
- Is there shade?
- Is there a path around the play space for children who get overwhelmed to get oriented?

Checklist for Design
The checklist will provide detailed guidance for the layout of the selected play space and support the organization of the painting event. The information gathered with the checklist will be beneficial in formulating a scaled plan. This process will require some basic mathematic skills and some simple tools to complete the tasks.

- Develop a site plan by measuring the selected space to make a scaled drawing.
- Determine how many recess games the play space will accommodate.
  - Write down the dimensions of the of the perimeter and all markings already in use (i.e., basketball court).
- Decide how to make the scaled drawing of the identified play space. This can be accomplished by hand or through the use of the Digital Playground Layout Tool.
- If you choose to create a digital playground layout, obtain a Google Maps or Google Earth screenshot of your play space and use Desmos to make the picture to scale.
- Select the recess games and determine how many recess games will be incorporated into the play space.
- Create the playground layout by using the Digital Playground Layout Tool or drawing it by hand.

Develop a Sketch

Developing a sketch provides critical information about the size of the identified area, location of existing objects, and cardinal directions. Using an aerial view when making the sketch, record the dimensions (i.e. perimeter), and include all markings already in use (i.e. basketball court). After creating the sketch, use the measurements on the site plan to determine the scale factor of the play space(s).

Refer to Figure 1 below.

Equipment:
- Measurement tools (measuring tape, measurement wheel, etc.)
- Visual observation of the playground, courts and/or sidewalks
- Paper and pencil

Steps:
1. Choose a suitable play area for the games. Consider the physical size of the area, slope of the ground, location of utilities (e.g., poles, meters), site drainage, site access, and trees and vegetation.
2. Visually establish the approximate boundaries of the proposed play space.
3. On the paper, sketch the boundary lines, existing courts/game markings, and any obstacles.
4. Measure and label your sketch with the measurements around the area’s boundary. This does not have to be to scale for this rough sketch.
5. Measure additional courts, game markings, or obstacles and label them on your sketch. Be sure to record all measurements in feet and inches.
6. Use this sketch for the next part of “Prepare a Scale Drawing.”
Prepare a Scale Drawing

The purpose for creating a scale drawing in this project is to reduce the size of the play space to fit on paper through a scale ratio. The scale drawing will reflect the actual length on the play space to a scale length in the drawing, creating dimensions that are proportional to the actual size of the object being drawn.

The change in size between the original object (the play space) and the scale drawing that is being created is represented by a ratio, such as 1:2 (read as “one to two”). For the intention of this project, the first number in the assigned ratio will represent 1 square on the grid paper to the second number of 2 feet on the actual play space (1 square: 2 feet).

Option #1: Digitally

Go to Digital Playground Layout Toolkit

Option #2: By Hand

**Equipment Needed:**
- Sketch from “Measuring the Playground” (Figure 1)
- Pencil
- Grid Paper (or quarter inch grid paper)
- Calculator
- Ruler

**Steps:**
1. First, mark north on the site plan.
2. Then, use the ratio identified above (1 square: 2 feet) for the scaled drawing.
   The stencils in Figure 3: Dimensions Table are relational to this scale ratio.
Scaling the drawing to meet this requirement will allow for accurate placement of the stencil picture when designing the play space.

3. Convert the actual measurements with the ratio. Start with the length of the playground. If the length of the play area is 80 feet, the length represented on the grid paper will be 40 squares. Remember, one square on the grid paper will be 2 feet in real life. If the width in real life is 60 feet, the width represented on the grid paper will be 30 squares.

4. Using the scale factor and a ruler, start drawing the perimeter on the grid paper with a straight segment of the perimeter when possible. A straight segment will be easier to check against the converted length and width.

5. Refer to the sketch drawing frequently to check for consistency on the converted measurements.

6. Label the lengths and widths of the play space with their true measurements, not the scaled measurements.

7. Add the additional courts, game markings, or obstacles after finishing the perimeter which will be similarly scaled.

8. Double check that all lines of the drawn images match the converted scale measurements.

9. Scan the image or snap a picture of the scaled drawing with a phone to make it digital.

10. Insert the image into the Digital Playground Layout Toolkit and select the activities that you want to incorporate on your playground.

11. Use the measurements in the Figure 3: Dimensions Table below in the “Select the Activities” section to create your playground layout or the pictures of the stencils in the Digital Playground Layout Toolkit.

12. See an example of a hand drawn playground layout with grid paper in Figure 2 below.
Select the Activities

In the table below, find the dimensions for each activity, the estimated paint time, paint colors needed for the stencil, and paint square footage to help you order paint for the stencils you are selecting.

*Figure 3: Dimensions Table*
<table>
<thead>
<tr>
<th>Name of Activity or Stencil</th>
<th>Dimensions</th>
<th>Estimated Paint Time</th>
<th>Colors of Paint Needed</th>
<th>Picture (each grid square = 2 ft.)</th>
<th>Paint Square Footage</th>
</tr>
</thead>
</table>
| Hopscotch                  | 13 feet long x 9 feet wide | 1-2 people for 1-2 hours | Minimum 2 and maximum 6 colors | ![Hopscotch Picture](image.png) | Total= 24 ft 2 3 colors
White- 10 ft2
Blue- 8 ft2
Yellow- 6 ft2
6 colors
Green = 4 ft2
Red= 4 ft2
Blue= 1 ft2
Yellow= 2 ft2
Orange=2 ft 2
Purple= 1 ft2
White =10 ft 2 |
| Copy Cat                   | 4 feet 5 inches wide x 11 feet long | 1-4 people for 1-2 hours | Minimum of 4 colors and maximum of 8 colors | ![Copy Cat Picture](image.png) | Total = 32-48 square ft depending on many boxes are included
Options: 4/6 boxes. Paint feet too. |
<p>| Fitness Stations #1        | Each stencil is 3 feet x 8 inches across | 1-2 people for less than one hour | Minimum of 1 color and maximum of 3 colors | <img src="image.png" alt="Fitness Stations #1 Picture" /> | Each stencil = 3 square ft |
| Fitness Stations #2        | Each stencil is 3 feet x 8 inches across | 1-2 people for less than one hour | Minimum of 1 color and maximum of 3 colors | <img src="image.png" alt="Fitness Stations #2 Picture" /> | Each stencil = 3 square ft |</p>
<table>
<thead>
<tr>
<th>Challenge</th>
<th>Dimensions</th>
<th>Participants</th>
<th>Time</th>
<th>Colors</th>
<th>Total Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Four Square or T Box Challenge</td>
<td>Each side is 16 feet</td>
<td>2-4 people</td>
<td>1-2 hours</td>
<td>Minimum of 2 colors and maximum of 4 colors</td>
<td>Total= 256 square feet. Each square= 64 square feet</td>
</tr>
<tr>
<td>Agility Ladder or Dutch Jump Challenge</td>
<td>1 foot 8 inches wide, the length can vary</td>
<td>1-2 people</td>
<td>1-2 hours</td>
<td>Minimum of 2 colors and maximum of 6 colors</td>
<td>Total= 42 square feet. 21 square feet of one color and 21 square feet of another</td>
</tr>
<tr>
<td>Bullseye</td>
<td>7 feet in diameter and throwing line is 4 feet from Bullseye</td>
<td>1-2 people</td>
<td>2-4 hours</td>
<td>Minimum of 2 colors and maximum of 3 colors</td>
<td>Total=52 square feet Red= 32 square ft Blue= 16 square ft Yellow =4 square ft</td>
</tr>
<tr>
<td>Grid</td>
<td>Each side is 6 feet 8 inches</td>
<td>1-2 people</td>
<td>2-4 hours</td>
<td>Minimum of 4 colors</td>
<td>16 square feet</td>
</tr>
<tr>
<td>Figure 8</td>
<td>7 feet 8 inches x 15 feet 10 inches long</td>
<td>1-2 people</td>
<td>less than one hour</td>
<td>One color needed</td>
<td>24 square ft</td>
</tr>
<tr>
<td>Sensory Pathways: Components Below</td>
<td>Varies depending on activities selected</td>
<td>1-2 people</td>
<td>less than one hour</td>
<td>Varies depending on activities selected</td>
<td>Sensory Pathway: Use calculations of each movement below to calculate the amount of paint for the pathway.</td>
</tr>
<tr>
<td>Activity</td>
<td>Dimensions</td>
<td>Participants</td>
<td>Time Needed</td>
<td>Colors Needed</td>
<td>Area Needed</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------</td>
<td>--------------</td>
<td>---------------------</td>
<td>---------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Tiptoe</td>
<td>3 feet 6 inches wide and length can vary (8-14 ft)</td>
<td>1-2 people</td>
<td>for less than one hour</td>
<td>One color needed</td>
<td>Tiptoe: (8-14 ft long) = 12 square ft</td>
</tr>
<tr>
<td>Tightrope</td>
<td>3 feet 6 inches wide and 15 feet long</td>
<td>1-2 people</td>
<td>for less than one hour</td>
<td>One color needed</td>
<td>Tightrope: (15 feet long) 16 square feet</td>
</tr>
<tr>
<td>Hop</td>
<td>16 inches wide (each circle is 11.5 inches) and 6 feet long</td>
<td>1-2 people</td>
<td>for less than one hour</td>
<td>One color needed</td>
<td>Hop-10 square ft</td>
</tr>
<tr>
<td>Side Jump</td>
<td>3 feet 6 inches wide (each print is 11 inches) and 8 feet long</td>
<td>1-2 people</td>
<td>for less than one hour</td>
<td>One color needed</td>
<td>Jump-16 square ft</td>
</tr>
<tr>
<td>Sprint</td>
<td>3 feet 4 inches wide, length 15-20 ft</td>
<td>1-2 people</td>
<td>for less than one hour</td>
<td>One color needed</td>
<td>Sprint (15-20 feet long) 12 square feet</td>
</tr>
<tr>
<td>Activity</td>
<td>Size/Description</td>
<td>Participants</td>
<td>Colors</td>
<td>Paint Needed</td>
<td>Total Area</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------------------------------------------------</td>
<td>--------------</td>
<td>--------</td>
<td>--------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Basketball Court</td>
<td>Regulation Size: Approximately 12 feet by 25 feet.</td>
<td>2-4 people for 1-2 hours</td>
<td>2-3 colors needed</td>
<td>300 square feet.</td>
<td>Lane/Key: (red) 200 square feet, Top of Key: (Blue) 60 square feet, Lines: 40 square feet</td>
</tr>
<tr>
<td>Wall Soccer</td>
<td>4 feet wide and 6 feet long (need a wall space)</td>
<td>1-2 people for one hour</td>
<td>2 colors minimum</td>
<td>24 square ft.</td>
<td>Wall Targets= 14 square feet, Shooting Spots = 10 square ft</td>
</tr>
<tr>
<td>R-P-S Showdown</td>
<td>1-foot-wide length varies</td>
<td>1-2 people for one hour</td>
<td>1 color minimum</td>
<td>15 square feet of paint for 15 spots</td>
<td></td>
</tr>
</tbody>
</table>
Preparation Phase

Timeline to Organize the Painting Event

The project timeline below provides a chronological overview for organizing a painting event. Some considerations listed may not be necessary for all projects. It is important to reflect on each component of the provided list in order to ensure a successful painting event.

2 to 6 Months Prior to the Scheduled Painting Event
- Obtain permission from the principal for this project and discuss the budget of the project. Paint and supplies for one playground typically are around $1,000.
- Contact Shana Classen, Director of Health and Physical Education at the Oklahoma State Department of Education, to reserve a set of stencils which can be borrowed for your paint day. Stencils can be bought for repeated use.
- Complete the design phase of the project.
- Order the paint from a paint or hardware store. Paint should be suitable for concrete or pavement. Ask about parking lot paint which is typically water-based acrylic.
- Use the “Paint Square Footage” in the table above to calculate how much paint you need to order.
- Obtain or plan to borrow a power washer.

1 Month Prior to the Scheduled Painting Event
- Secure a list of volunteers.
- Buy paint supplies.
  - 3-inch flat and angled paintbrushes
  - 4-inch wire rollers
  - 9-inch wire rollers might be needed for large areas like basketball court.
  - Paint trays
  - Paint tray liners
  - Canvas drop cloths
  - Painter’s Tape or Duct Tape

1 Week Prior to the Scheduled Painting Event
- Prepare the area to be painted. It must be clean! Paint will not adhere to a dirty surface!
  - Sweep a couple of days before painting.
  - Power wash the area to clear it of all debris.
- Identify a paint station location (consult the principal/custodian) near or at a water source (water key and faucet with a hose).
- Obtain a water key from the principal.
- Ability to wash paintbrushes.
- Make a sign-in sheet for volunteers.
- Make copies of the play area layout map (created digitally or by hand) and instructions for each stencil you are painting to make it easier on your paint volunteers.
- Assign volunteers to the stencils.
- Obtain milk crates to organize clean and dirty brushes.
- Obtain plastic bags (e.g., shopping bags) to wrap the paintbrushes or rollers in between uses. This will prevent the brushes/rollers from drying out or requiring you to wash out the brushes between uses.
- Take some “before” photographs.

**Day of Scheduled Painting Event**

- Set up a check-in table with sign-in sheet.
- Set up the paint station before volunteers arrive. Pour all paint at the paint station and use a drop cloth to avoid spills or messes on the playground surfaces.
- Obtain one or two trash cans.
- Turn on water with the key. Use a hose with a spray nozzle to wash out brushes. Consider having volunteers at the paint station to wash out brushes.
- Organize paint containers and open lids (but keep the lid slightly on).
- Organize the clean and dirty brushes.
  - Consider turning a milk crate upside down and place the brushes in the slots.
- When volunteers arrive, provide the “How to Paint the Stencils” instructions that are included below.
- Ask volunteers to sweep the area where the game will be painted on the surface. Brooms need to be available at paint station.
- Manage the process.
  - Ensure that you or one other person is overseeing the entire effort.
  - Always look for areas that need help and assign volunteers to the cleaning station as needed.
  - Provide instructions to volunteers about how to clean up and return supplies at the end of the day.
  - All stencils will need to be washed off and cleaned before volunteers leave. Also, the paintbrushes and roller pads will need to be cleaned or disposed of before volunteers leave. The lids of the paint will need to be secure.
- When the day is complete, take some “after” photographs.
How to Paint the Stencils

The following suggestions were generated to make painting with stencils as easy as possible.

- Get the necessary paint and paintbrushes from the paint station and stencil(s) for your assigned game.
- Carry the supplies to the assigned area according to the play area layout map.
- Double-check to make sure the surface is clean! Paint will not adhere to a dirty surface! May need to get a broom from the paint station.
- Lay the stencil(s) down in the play area and use the correct paint colors for the game’s design.
- Use one brush for each color. Place the paintbrush in a plastic bag after use so it doesn’t dry out.
- Remember, less paint is best. Use dabbing action with the paint brush to get the paint into the creases and crevices.
- Touch up any areas that didn’t get full coverage of paint after 15-30 minutes after first coat.
- If time permits, allow the paint to dry for 15-30 minutes before moving the stencil. If time doesn’t allow for dry time, move the stencil very carefully by picking up all four corners to avoid dragging the stencil through the damp paint.
- At the end of the day, take all stencils, paint and all supplies back to paint station.
- All stencils will need to be washed off and cleaned before volunteers leave.
- All paintbrushes and roller pads will need to be cleaned or disposed of before volunteers leave.
- The paint cans need the lids to be secure.