

Painting Preschool Playgrounds for Movement



Center for
Healthy Communities
CALIFORNIA STATE UNIVERSITY, CHICO



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Thank you to the following partners!

Butte County Office of Education- Child Development Programs and Services
Glenn County Office of Education Child and Family Services
Orange County First 5 Children and Families Commission
Fastline Stencils

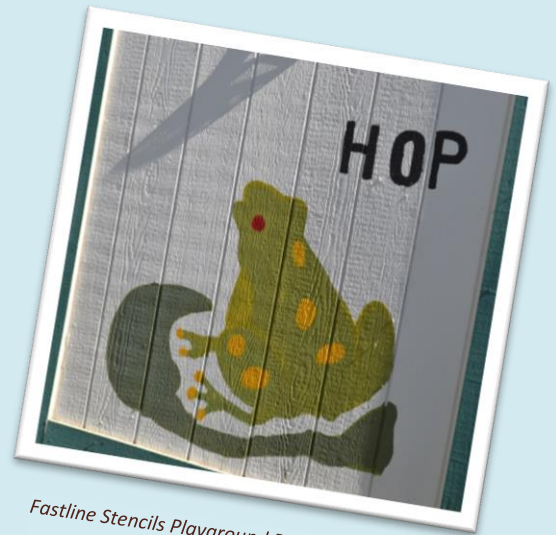
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Introduction

This guide was developed to aid in designing and painting playgrounds with a goal of increasing opportunities for physical activity in preschools. The guide addresses:

- Preschool physical activity recommendations;
- Fundamental movement skills;
- Suggested playground elements; and
- Preparation and instructions for painting and tools to assist with playground designs.



Fastline Stencils Playground Pond

With a Community Grant from California Department of Public Health's (CDPH) California Obesity Prevention Program, the California State University Chico, Center for Healthy Communities piloted the use of inexpensive and reusable playground stencils to enhance outdoor physical activity opportunities for preschool children at 8 sites.

The Center for Healthy Communities' observational study of playgrounds enhanced with stencil designs confirmed that the use of playground stencils during the above mentioned pilot program resulted in a significant increase in active play when stenciled playgrounds were compared with a control site without stencils.



Fastline Stencils Sunflower Hopscotch

Buran M, Frigaard M. Painting Playgrounds for Movement: Preventing Obesity in Preschool Settings. Poster session presented at: 7th Biennial Childhood Obesity Conference; 2013 Jun 18-20; Long Beach CA

http://www.researchgate.net/publication/260391867_Painting_Playgrounds_for_Movement_Preventing_Obesity_in_Preschool_Settings

Physical Activity Recommendations

Adapted from Caring for Our Children: National Health and Safety Performance Standards. Preventing Childhood Obesity in Early Care and Education Programs (pages 51-58)

Standard 1: Active Opportunities for Physical Activity (PA)

The facility should promote children’s active play every day. Children should have ample opportunity to do moderate to vigorous physical activities (MVPA) such as running, climbing, dancing, skipping, and jumping. All children, birth to six years, should participate daily in:

- Two to three occasions of active play outdoors, weather permitting;
- Two or more structured or caregiver/teacher/adult-led activities or games that promote movement over the course of the day—indoor or outdoor; and
- Continuous opportunities to develop and practice age-appropriate gross motor and movement skills.

The total time allotted for outdoor play and moderate to vigorous indoor or outdoor physical activity can be adjusted for the age group and weather conditions.

Outdoor play:

1. Infants (birth to twelve months of age) should be taken outside two to three times per day, as tolerated. There is no recommended duration of infants’ outdoor play.
2. Toddlers (twelve months to three years) and preschoolers (three to six years) should be allowed 60 to 90 total minutes of outdoor play.

Moderate to Vigorous Physical Activities:

1. Toddlers should be allowed 60 to 90 minutes per eight-hour day for moderate to vigorous physical activity, including running.
2. Preschoolers should be allowed 90 to 120 minutes per eight-hour day.

Standard 2: Playing Outdoors

Outdoor play provides children the proper environment for MVPA. Children should play outdoors daily when weather and environmental conditions do not pose a significant health or safety risk. Outdoor play for infants may include riding in a carriage or stroller; however, infants should be offered opportunities for gross motor play outdoors, as well.

Standard 3: Caregivers'/Teachers' Encouragement of PA

Caregivers/teachers should promote children's active play and participate in children's active games at times when they can safely do so. Caregivers/ teachers should:

- Lead structured activities to promote children's activities two or more times per day;
- Wear clothing and footwear that permits easy and safe movement;
- Not sit during active play;
- Provide prompts for children to be active, e.g., "good throw";
- Encourage children's physical activities that are appropriate and safe in the setting , e.g. do not prohibit running on the playground when it is safe to run;
- Have orientation and annual training opportunities to learn about age-appropriate gross motor activities and games that promote children's physical activity; and
- Limit screen time (TV, DVD, computer, etc.).

Standard 4: Policies and Practices that Promote Physical Activity

The facility should have written policies on both the promotion of physical activity and the removal of potential barriers to physical activity participation. Policies should cover the following:

- Benefits of physical activity and outdoor play;
- Duration: children will spend 60-120 minutes each day outdoors, depending on their age, and weather conditions;
- Actions to take to ensure indoor physical activity and gross motor activities on days with more extreme weather conditions (e.g. very wet, very hot or very cold);
- Setting: provision of covered areas for shade and shelter on playgrounds, if feasible; and
- Recommendation for children's attire that ensures that:
 - Clothing permits easy movement (not too loose and not too tight) that enables children to participate fully in active play; and
 - Footwear provides support for running, climbing and jumping

American Academy of Pediatrics, American Public Health Association, and National Resource Center for Health and Safety in Child Care and Early Education (2012). Preventing Childhood Obesity in Early Care and Education: Selected Standards from Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, 3rd Edition.
http://nrckids.org/CFOC3/PDFVersion/preventing_obesity.pdf

Fundamental Movement Skills

Guidelines for skill development are drawn from the **California Preschool Learning Foundations (PLF)** for Physical Development and are summarized below.

You can see how playground stencils provide an excellent opportunity for children to practice these developmentally-appropriate movement skills.

Perceptual-Motor Skills and Movement Concepts

- **Balance-** The state of having your weight spread equally so that you do not fall. The ability to move or to remain in a position without losing control or falling.
- **Locomotor skills-** Skills children develop while travelling, including walking, running, jumping, hopping, leaping, galloping and side-stepping.
- **Manipulative skills-** Skills using arms, hands, and feet to handle object with increased coordination, such as rolling a ball underhand, tossing underhand, bouncing, catching, striking, throwing overhand, and kicking.
- **Body awareness-** Children learn and are able to name body parts
- **Spatial awareness-** Children safely use their own body, general space, and other people's space when moving.
- **Directional awareness-** Ability to understand and distinguish between the sides of the body, change directions quickly and accurately, ability to place an object or own body in front of, to the side, or behind something else.

Active Physical Play

- **Active participation-** Initiate more complex physical activities for a sustained period of time.
- **Cardiovascular endurance-** Engage in sustained active play of increasing intensity that involves the heart, the lungs, and the vascular system.
- **Muscular strength, muscular endurance, and flexibility-** Engage in increasing amounts of active play activities that enhance leg and arm strength, muscular endurance, and flexibility.

Preschool Learning Foundations, Volume 2, California Department of Education (November 2011).

<http://www.cde.ca.gov/sp/cd/re/documents/psfvol2pdeng.pdf>

Learning through Movement

Physical activity supports more than fundamental movement skills in young children. By using the playground stencils for free- and teacher-led play, children gain motor skills while complementing learning in the following areas:

- **Social-emotional development-** By participating in group activities, children learn self-awareness, self-regulation, interaction, group participation, and cooperation.
- **Language and literacy-** By integrating letters and pictures into the playground, children practice their language use and conventions, letter recognition and letter sounds.
- **English-language development-** By participating in free play and teacher-led activities, children have the opportunity to practice listening, speaking, letter awareness, rhyming, and color recognition.
- **Mathematics-** By utilizing playground stencils with numbers and patterns, children can practice number recognition, counting, patterning, and measurement.
- **Nutrition-** By integrating fruits and vegetables into the playground, healthy food choices are promoted.

Designing Your Playground

When designing a playground it is important to work closely with teachers to determine how the play space is used. Below is a step-by-step guide to help plan an optimal design:

1. Walk through the playground with the site director and teachers and complete the **Playground Design Assessment Tool** (see Appendix A). In addition, it is helpful to observe the playground during free play and during teacher-led group activities.
2. Take measurements and sketch the layout of the playground.
3. Determine what type of approval is necessary to paint on the playground. In some cases preschool sites are rented and approval must be received by the owner in writing.
4. Taking into consideration the Suggested Playground Elements on the next page, determine which stencils and designs are suitable for the space.
5. Avoid painting in areas near heavy dirt and sand as they will cause rapid wear and tear.
6. Be sure to leave enough space between stencil designs and playground fixtures (benches, poles, slides, etc.) for children to use the stencil designs safely.

Suggested Playground Elements

When designing the playground, be mindful to design it with the intent to create more opportunities for movement. Using playground stencils or designing a playground by hand using chalk and a creative eye, the following components can be integrated into a play space to infuse movement.

TRACKS

Consider how the space is currently used. Does it create maximal opportunities for movement for all children? Do wheeled toys obstruct play for other children? Consider painting a track in the back of the play space so children will not be cutting through the track to get to other areas. Include directional arrows, crosswalks and signs. Consider creating a parking lot for orderly toy storage. If wheeled toys and associated tracks cut into the play space too much, consider having “no-bike days” so children can use the space for locomotor and manipulative play as well.

***PLF Skills:** locomotor skills, spatial awareness, directional awareness, active participation, cardiovascular endurance, and muscular strength, endurance and flexibility



Playground track painted free-hand by CSU Chico Center for Healthy Communities



Combination of free-hand painting and Fastline Stencils Playground Pond from CSU Chico Center for Healthy Communities

GROUP ACTIVITY SPACE

This should be a space located where teachers can lead group activities while assuring children have ample space for themselves and can respect the personal space of others. Paint round or shaped markers approximately 3 feet apart from each other. These can be dispersed randomly. Teachers can call out a variety of movement skills. Have children walk around their marker, jump over it, balance on it, and toss and catch a beanbag while standing on spot.

***PLF Skills:** locomotor skills, spatial awareness, directional awareness, active participation, cardiovascular endurance, manipulative skills, and muscular strength, endurance and flexibility

PATHWAYS

Paint lines in curved, zig zag and straight designs. Children can practice locomotor and balance skills on the lines.

**PLF Skills: locomotor skills, balance, spatial awareness, directional awareness, and active participation.*



Fastline Stencils Playground Bicycle Road Path and Signs



Fastline Stencils Bull's Eye Toss

BULL'S-EYE FOR TOSSING, THROWING AND KICKING

Children are mastering tossing, throwing, striking objects and kicking at this age. Bull's-eyes or targets provide an opportunity to practice these skills.

**PLF Skills: manipulative skills, balance, and active participation*

SHAPES, LETTERS, NUMBERS & COLORS

By integrating shapes, letters, numbers and colors into the playground, teachers have the opportunity to teach academic topics through movement. Preschool children are learning both upper and lower case letters and numbers from 1-20. They are also learning the following shapes: circle, oval, square, rectangle, triangle, hexagon, octagon, diamond and crescents.

**PLF Skills: locomotor skills, spatial awareness, directional awareness, active participation, cardiovascular endurance, manipulative skills, and muscular strength, endurance and flexibility*



Fastline Stencils Snake Hopscotch with Letters

HOPSCOTCH

Painting hopscotch-like activities onto a play space provides children the opportunity to practice jumping, hopping, leaping, balancing and tossing. Many stencils have letters and numbers which provide an additional opportunity for letter and number recognition.



Sample free-hand hopscotch from Shutterstock

***PLF Skills:** *locomotor skills, active participation, cardiovascular endurance, balance, spatial and directional awareness.*

MANIPULATIVE PLAY AREA

If possible, distinguish a play area dedicated to manipulative play (hoops, jump ropes, scoops, flying disks, beanbags, etc.). Rotate equipment on a weekly basis and introduce skills and various activities.

***PKLF Skills:** *active participation, cardiovascular endurance, manipulative skills, and muscular strength, endurance and flexibility*



Child dribbling from Shutterstock



Child catching from Shutterstock

Preparing for Paint Day

Schedule your paint day

Determine a day and time when children will not be present for at least 24 hours. Plan for an 8-hour day, although the team may finish sooner. Don't forget to check the weather! Rainy or extremely cold or hot days are not good days to paint. You will need one day in advance to prepare for painting.

Prepare the ground

Pressure-wash the playground to remove dirt and debris the day before you paint.

Recruit a paint team

A team of 5-10 people is ideal. Staff may be available to serve as the paint team, but also consider recruiting volunteers such as; artists, college students, high school students and older Girl and Boy Scouts.

Purchase or create stencils

Reusable playground stencils can be purchased through a variety of vendors.

If stencils are not an option, "homemade" stencils can be created using cardboard and the Suggested Playground Elements. Many examples are available at:

<https://www.pinterest.com/explore/playground-painting/>

Pull together necessary supplies and materials

- Drawing of playground design
- Playground stencils (purchased or homemade)
- Asphalt or curb-marking paint (Red, yellow, blue, black, white). Paint vendors can suggest appropriate paint depending on the playground surface (smooth concrete or rough asphalt). Be sure to ask for recommendations regarding the best cleaning agent for spills (water or paint thinner)
- Paintbrushes (1 to 3 inch) or paint sprayer
- Mixing cups (start saving yogurt containers)
- Water and clean up supplies (paper towels, rags, wipes, old t-shirts)
- Paint station- this can be a tarp, sheet or cardboard. All paint should be poured and mixed at this station to prevent spills
- Thick masking tape to tape down stencils and/or create straight edges
- Heavy items to hold down stencils on windy days (rocks, blocks, hand weights, etc.)
- Chalk to outline the stencils or draw elements free-hand
- Pressure washer and/or hose

Paint Day

1. Place stencils on the ground according to the playground design drawing. Make sure everything fits as anticipated and make modifications if needed.
2. Determine the colors for each component. Be mindful that too many colors and color combinations can be overwhelming. Simple is better. Primary colors can be mixed to make all the colors of the rainbow (orange=red + yellow, green = blue +yellow, purple = blue + red). White and yellow stand out the most.
3. There are 2 options for painting with stencils:
 - Outline the stencils with chalk and then paint. This keeps the stencils clean and there is less risk of stencils blowing away or smearing wet paint, or
 - Secure stencils down with tape or heavy objects and paint along the stencil. Check to make sure paint is not bleeding past the stencil outline.

Using a 1-2 inch brush, paint the outline of the shape. Then fill in the shape using the same brush or a larger, 3 inch brush. The paint should go on thick. Ideally you will need only one coat.

4. Wash, rinse, or wipe down stencils to remove excess paint. If the paint is water soluble, mistakes can be cleaned up with water. If the paint is not water soluble, you will need paint thinner. Talk to your paint supplier when paint is purchased.
5. Allow paint to dry for 24 hours before use.
6. To maintain, sweep or rinse the playground regularly to minimize dirt and debris which wear down the paint more quickly.
7. Save the cans of paint and touch up on an annual basis or as needed.



Fastline Playground Stencils

Bull's-eye

A bull's-eye can be painted on the ground, a wall or fence. If painted on the wall, be mindful that children will throw soft objects at it, so make sure it is a sturdy location that won't disturb the classroom or risk broken windows.



Fastline Stencils Bull's Eye

Tossing with Precision

Use the bull's-eye as a target for a beanbag toss.

Children practice an underhand toss from various distances. Consider designating a different activity for the child to perform depending on the color the beanbag lands on.

Jumping for Distance

Children can practice jumping (with 2 feet) to land on the bull's-eye from various distances.

The teacher can call out a color as a child tries to jump to it.

Balance on the Spot

Practice balancing in a variety of different ways. Children can practice balancing on one foot, or one hand and one foot. They can also practice balancing a beanbag on different body parts while keeping themselves and the beanbag in the circle.



Fastline Stencils Bull's-Eye Toss

Painting variations:

Use the stencil with or without the numbers.

To paint this without a stencil, trace a small round container for the inside. Using various lengths of string and sidewalk chalk, hold the string in the center of the bull's-eye with the other end of the string tied to a piece of chalk. Extend the string until straight. Create a circle, keeping the string pulled taught, as you rotate around the spot.

Tracing around various sized hoops will also result in a bull's-eye design.

Alphabet Designs

You can find a variety of stencils using letters of the alphabet. Be creative and create spaces for children to practice letter recognition and sounds while moving.

Spell Your Name

Children can jump or hop from letter to letter spelling out their name as they go.



Fastline Stencils Alphabet Tree

Letter Call Out

The teacher calls out a letter and children leap to the letter and balance on one foot until next letter is called.

Jump the Alphabet

Children jump or hop from letter to letter as they go through the alphabet. Have children call out the letter or the sound the letter makes before moving to the next letter.

Beanbag Toss

Designate a starting spot for each child and have them toss a beanbag onto a letter. They then identify the letter and sound.

Dribbling the Alphabet

Using a playground ball, have children practice dribbling to see how many letters they can bounce on.

Painting variations and Suggestions

Integrate primary colors if possible. Talk to teachers to make sure the font is appropriate for each letter. For instance, children are not learning this type of “a”. You may need to modify the “a,” “g” and “q.”

Playground Road Path and Signs

Preferably, road paths should be painted in a space that does not conflict with non-wheeled play. Use crosswalks and signs to create a safe environment.

Form a Loop

The path should form a loop. It may be a simple line for children to follow or it may be 2 lines that they ride in between.



Free-hand track with Fastline Stencils

Directional Arrows

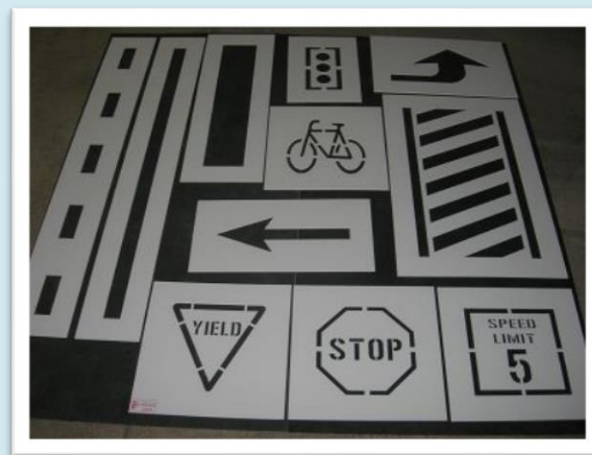
Use arrows to make sure children are moving in the same direction. Arrows can be painted on the ground; sidewalk chalk can be used if teachers would like to switch directions.

Not Just for Bikes

Provide a variety of wheeled toys (i.e. scooters, belly boards, tricycles, etc.) and rotate them or allow children to choose.

No-Bike Days

If the path takes up a significant amount of space, consider having “no-bike” days to use the path for other activities. For example, children can practice dribbling a ball along the path.



Fastline Stencils Playground Bicycle Road Path and Signs

Pathways

Integrate pathways throughout the playground and let children practice manipulative and balance skills using the following activities:

Find the Shape

Starting on one shape, children can follow a pathway by walking, tip-toeing, and sidestepping their way to the matching shape.

Make sure the child names the shape and color they are standing on.

Balancing Act

Children can pretend they are walking on a balance beam as they navigate along the pathway. The teacher can have children pretend like its windy outside or have children move creatively along the pathway (i.e. pretend like skating, walk backwards, heavy steps, etc.)

Crossing Safely

Overlapping pathways provide an opportunity to teach children how to move safely while respecting other's personal space. Children must communicate as the pathways cross each other.

Painting Variations and Suggestions

Consider using various pathways to connect shapes and colors.

Consider integrating shapes (i.e. oval, star, diamond, heart, crescent), letters or numbers into the pathway. Draw free hand if need be.



*Free-hand curved pathway from CSU
Chico Center for Healthy Communities*

Jump for Distance

Children pretend they are jumping over a brook or small stream. The lines start close together, (about 1 foot apart) and they get wider (about 3 feet) on the opposite end so they can practice various distances.

Leaping Lizards

Children are learning to leap, which is a transfer of weight from one foot to the other in a forward motion. Both feet are off the ground in the transfer. Starting at the narrow end, have children leap over the brook as they work themselves down to the wider end of the brook. Have children pretend that they are trying not to get wet.

Long Jump

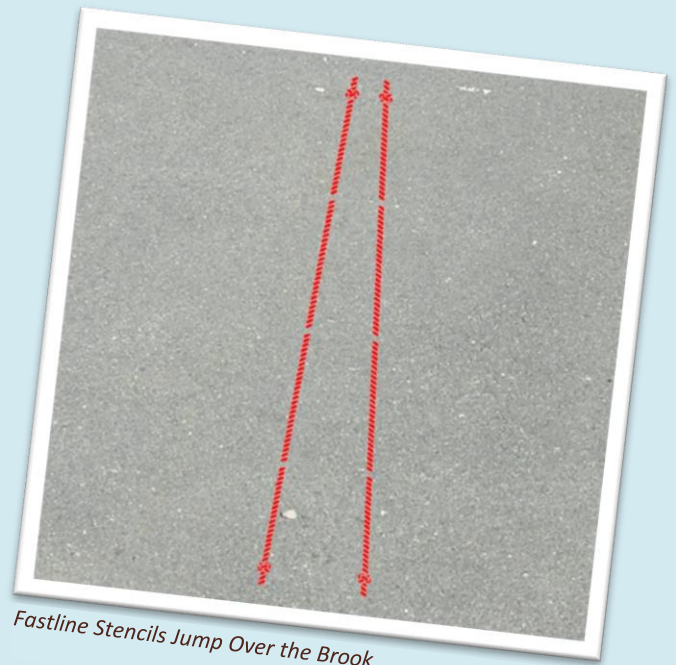
Instead of leaping over the brook, have children jump with 2 feet back and forth down the length of the stream as it gets wider and wider.

Make a Bridge

Children will start at the narrow end, bending over with feet on one line and hands on the other line. They will then side step to the wider end, keeping hands and feet on the line. For an extra challenge, have the child balance a beanbag on their back.

Cross the Line

Only one line is needed per child. Any line can be used for this activity. Have children straddle the line with right foot on right side and left foot on left. As they walk the length of the line, have the child cross the right foot over the line to the left and then cross the left foot to the right side of the line.



Fastline Stencils Jump Over the Brook

Hopscotch

There are a variety of hopscotch stencils available. Some favorites among preschool teachers are versions with numbers and letters.

Count the Way

Children make their way along the path by jumping with 2 feet, hopping with 1 foot, leaping, tip-toeing, marching or any other creative

movements. Another option is to call off different activities as the children land on a number. For example, when a child lands on #5, he or she will perform 5 jumping jacks, counting aloud.



Sample hopscotch from Shutterstock

A to Z

Children move along the path saying each letter as they land on it. For an extra challenge, have the child say the sound that each letter makes when they land on it. The teacher can come up with different motor skills for each letter (jump high, stomp loud, balance on one foot, make yourself big, make yourself small, etc.).



Sample hopscotch from Shutterstock

Vertical Jump

If possible, consider using vertical space such as a wall. Children can practice jumping to reach components of the stencil.

Animal Movements

Animal characters with their movements can be painted on the ground or on walls or fences to inspire creative and physical play.



Pond Party

The teacher can split children into 4 groups. Each group stands on an animal (e.g. turtle, frog, duck, or fish). When the teacher starts the music, the children perform their activity (crawl, hop, walk, or pretend swim) throughout the general space. When the music stops, they rush to a different animal. Repeat the activity, adding variety along the way.

Animal Expression

Perform the same activity as above and add a step. Have the children move in a variety of different ways (i.e. silly, quickly, slowly, quietly, etc.).

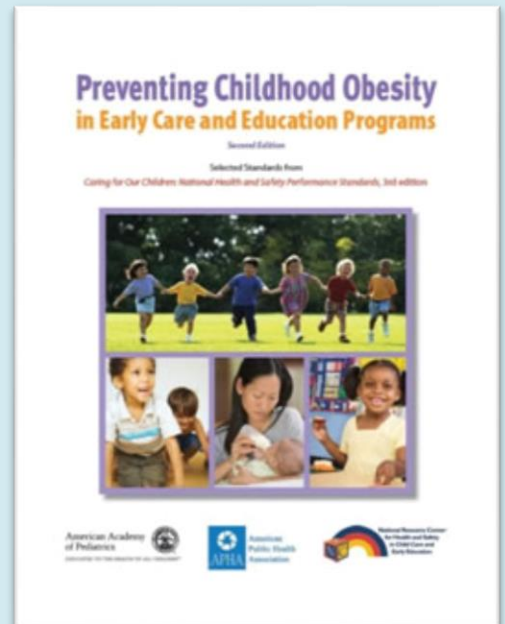
Animal Play

Create an outline for the animals' environment and paint the animals inside (e.g. pond, forest). This provides a general space for group activities. Let the children come up with their own animals to "act out."



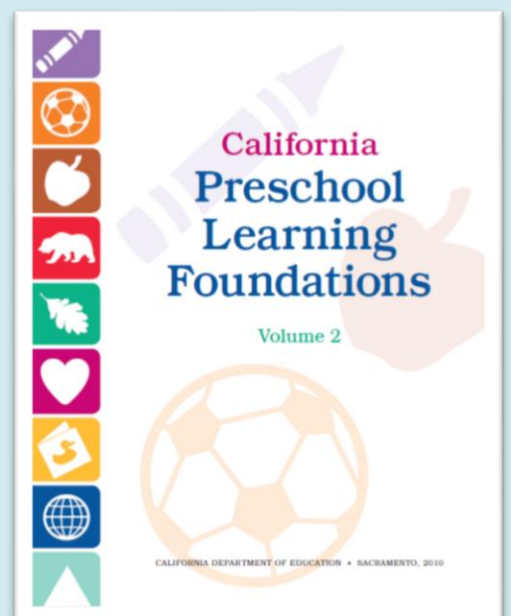
References

American Academy of Pediatrics, American Public Health Association, and National Resource Center for Health and Safety in Child Care and Early Education (2012). Preventing Childhood Obesity in Early Care and Education: Selected Standards from Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, 3rd Edition. http://nrckids.org/CFOC3/PDFVersion/preventing_obesity.pdf



Preschool Learning Foundations, Volume 2, California Department of Education (November 2011).

<http://www.cde.ca.gov/sp/cd/re/documents/psfvol2pdeng.pdf>



Reusable Playground Stencil Vendors

There are many vendors that offer playground stencils, however they are not all reusable and some are more durable than others. Be sure to ask what type of material they are made of and how they will need to be stored. Below is a sample list of possible vendors:

- Best Sign Store
www.bestsignstore.com
- Fastline Stencils
<http://www.fastlinestencils.com/>
- Fit and Fun
www.fitandfunplayscapes.com
- NewStripe
www.newstripe.com
- Stencilease.com
www.stencilease.com

****Please note that inclusion in this list does not imply endorsement. Vendor names are provided as example only.***

Appendix A- Preschool Playground Design Assessment Tool

Tracks	Does a track exist? What types of wheeled toys are used? Notes
Group Activity Space	How many children use the space at one time? Is there a shaded area that can be used? Notes
Pathways	Is there space for zig-zag, curved, and straight lines to be painted? If no, consider painting inside the track and designate “no-bike days” to maximize movement for all. Notes
Bull’s-eye	Is there a space for a bulls’-eye or target to integrate tossing and throwing skills? Does the space interfere with tracks and hopscotch since children will be throwing items? Notes
Shapes Letters Numbers Colors	How can these components be integrated to support movement and learning? Notes
Hopscotch	Is there space for hopscotch-like activities? Can numbers, and letters be integrated? Notes
Manipulative Play Area	Is there a space to designate for manipulative play? Hoops, balls, flying disks, jump ropes, sit and spins, and balance toys. Notes
Vertical Space	Is there space to accommodate vertical play designs? Notes

**Please see planning and design grid on next page.*

