

A photograph of an outdoor play area. In the foreground, a child and two adults are sitting on the ground, engaged in an activity. The ground is covered with sand and numerous cut tree stumps. In the background, there are more trees, a blue table, and a yellow toy car. The scene is bright and sunny.

# How-To Guide

## Earth & Sand Play

A timeless favorite, digging activities provide young children with opportunities for constructive, imaginative play, and of course, for getting a little dirty! While sand is the most traditional material, earth play is another digging experience to consider and can make this timeless activity fresh and new in the outdoor learning environment.

### Duration



1/2 to 1 full day

### # of People



2 - 4

### Required Effort



Moderate effort and planning



Photo: Web



Photo: ECHO

## Materials

- Stumps – 12 to 18” diameter; 2.5 to 3’ long to be placed vertically
- Logs – 18” diameter 4’ to 6’ long
- Boulders/Stone(s) – Min. 16”
- Landscape fabric/weed barrier
- Peat moss (for earth play)
- Play sand (silicon-free), mason’s sand
- Tarp or cover
- Tarp or cover hardware (hooks, carabiners, etc.)
- Non-toxic, water-based wood sealant
- Access to power
- 50 grit sandpaper
- Landscape marking paint
- Storage bin
- (Optional) Lattice or other solid barrier to mount to fence

## Tools

- Shovels (Rounded, flat, and sharpshooter)
- Pick mattock(s)
- Rockbar(s)
- Hard rakes
- Sod Cutter (if applicable)
- Wheelbarrow(s)
- Chainsaw (if applicable)
- Electric sanders
- Extension cords
- Utility Knife or Heavy Duty Scissors
- Marking paint
- Tape Measures
- Paint brushes
- Paint trays
- Drop cloth(s)
- Leaf blower or air compressor with air nozzle

## Plants (optional)

- Native or ornamental ‘clumping’ grasses that are soft to the touch
- Small shrubs
- Large shrubs
- Small multi-stemmed trees



Photo: NWF

## Implementation Steps

### 1 Gather materials

### 2 Prep border materials - logs and stumps

- Bark should be left intact!
- Sand/bevel any sharp edges and splintery areas on logs and stumps.
- Using the leaf blower or air compressor, blow off any dust and debris from sanding.
- Weatherproof all logs and stumps and let them dry.

### 3 Mark out desired location

- Mark out the area with marking paint.

### 4 Dig out the area

- Excavate the area with picks, shovels, and the wheelbarrow(s).
- The ideal depth depends on age. (Pre-K – 18", Toddler – 12").

### 5 Place border materials

- Border height should be 12" tall for Toddlers or 18" tall for Pre-K, measured from the intended surface of the digging material.
- NOTE: Border materials should be twice as tall as the

ideal depth of the digging material. In other words, if Toddlers require an ideal depth of 12" for digging, and the border should be ideally 12" tall, then the border material should be 24" tall from the bottom of the excavated area.

### 6 Line the pit

- Lay landscape fabric/weed barrier along the bottom of the excavated area, overlapping the edges of the fabric 6".

### 7 Fill the pit

- For Sand Play, fill with silicon-free, play sand.
- For Earth Play, fill with play sand and peat moss, at a 50/50 ratio, alternating thin layers of sand and peat moss to make mixing the material easier. Rake out and mix with shovels as you go. Repeat until desired depth of 'earth' is achieved.

### 8 Cover

- Install hardware to fasten the cover.
- Cover with a tarp or other barrier while not in use to prevent neighborhood cats and wildlife from using the play setting as a litter box. *\*This is required in licensed settings.*

### 9 Place storage

- Storage should be easily accessible and placed near the play setting.



Photo: ECHO



Photo: Natural Learning Initiative (NLI)

# Considerations

- **Always call 811 before you dig to locate buried utilities.**
- Because of the peat moss, earth play drains better than sand, offers a grittier experience and becomes less compacted over time.
- For licensed spaces, wherever stumps or logs are placed next to an exterior fence that could potentially 'shorten' the height of it, be sure to maintain the 48" minimum height per licensing requirements. This height can be achieved by attaching lattice or some other permanent barrier to extend the height of the fence where needed.
- You can usually acquire tree parts (logs, stumps, etc.) from local tree companies or parks and recreation departments.
- Keep an eye out for tree work/removals in your neighborhood, and ask the tree crew if anyone has claimed the scrap...they are usually more than happy not having to haul it away.
- Check to ensure that any tree parts you acquire are free of pesticides or disease (e.g. Dutch elm disease.)
- Place a couple of boulders or large stones within the digging area to create a more natural feel.
- Consider adding a mud kitchen in or adjacent to earth and sand digging activities to provide just the right ingredients for creative recipes!



Cover photo credit:  
NLI

## Disclaimer

*Before installing new play and learning components in your outdoor learning and play space, please check with local regulatory agencies to ensure compliance with health and safety requirements. While the intent is to provide a general resource for reconnecting children to nature, the authors and program sponsor disclaim any liability based upon this information. PLAE Inc. assumes no responsibility for the design or installation of outdoor components for play and learning. In no event will PLAE Inc. be liable for any loss or damage including without limitation, indirect or consequential loss or damage incurred during the construction or use of the outdoor learning environment.*

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