



Log Steps, set of 4 #3917

Assembly & Installation Instructions

Please open and inspect all items upon receipt. If you have any questions or concerns, please contact us immediately.



Quality Commitment

Thank you for your shared commitment to connecting children with nature and your support of children's life-long learning. Nature Explore is dedicated to providing quality, research-based educational materials for your outdoor spaces, as well as outdoor classroom design services and educator workshops.

Our natural products are field-tested by trained educators who observe children using them in play—focusing on safety, educational-value and versatility—prior to being offered in the Resource Guide. Our natural products, such as wooden instruments, tables or balance beams, are hand-crafted by trusted professionals who support our shared mission. All natural products are constructed of materials carefully selected for functionality, safety and durability.

We encourage you to contact us with questions or for more information on our natural products and services. If inquiring about a past or existing order, please have your order number handy (Ex: SO90001234) so we may answer your questions and provide additional information as needed. **All of our warranty, return and exchange policies can be found online or sent by request. Please contact us at service@natureexplore.org or 1-888-908-8733.**

All items created by and manufactured exclusively for Nature Explore are done so in accordance with all relevant and applicable safety standards and recommendations as set forth by the U.S. Consumer Product Safety Commission and ASTM International. Be sure to consider additional regulations that may be unique to your site.

How to Assemble & Install Log Steps, set of 4

Recommended Ages: 2-12

Recommended Crew: 1-2 people

Hours to Install: 3-6

Capacity: 1 child at a time

Space Required/Use Zone: 19' x 13'

Highest Designated Play Surface: 1'

Footing: In Ground Posts, *Concrete Required (estimated 4 cubic feet)

* Concrete must have a minimum rating of 2,500 PSI and must be mixed per manufacturer's recommendations.

Before you begin:

- Please read and follow all safety information.
- Please review assembly, component and installation diagrams.
- Verify component and hardware quantities received.
- Familiarize yourself with installation procedures.
- Consult local building codes and regulations.



Nature Explore Recommends that permanent installation be performed by a licensed and bonded contractor.

Do not allow children to play on or near equipment that is in need of repair/ replacement, is incomplete or considered unsafe as serious injury may occur.

Failure to follow installation instructions may result in serious injury or death from falls.

Installation over a hard surface such as concrete, asphalt or packed earth may result in serious injury or death from falls.

Each log step is designed and intended to support only one child at a time.

***Natural wood products such as this will check, crack and possibly warp over time.** This is not a defect in the product, but a natural process that should be expected and can offer additional learning opportunities for children.*

***Allow time for the balance beam to properly adjust to your climate before assembly.** Natural wood products may swell or contract depending on climate. This may make assembly more difficult.*

***This product is NOT water-tight or weather-proof.** Annual to bi-annual reapplication of a preferred commercial water-seal, can extend the useful life of this item. Check with local building codes, playground experts, and wood preservation experts for the local rules and regulations to ensure best practices are implemented.*

Safety:

Toddlers (6 months through 23 months):

Log Steps are not recommended.

Preschool-age (2 through 5-years-old):

Log Steps shall be **no greater than**

- **20 inches** above the protective surfacing.
- **12 inches** apart, measured edge to edge between adjacent stepping surfaces.

(This measurement will be horizontal when adjacent log steps are at the same height and it will be diagonal when adjacent logs steps are at different heights.)

School-age (5 through 12-years-old):

Stepping forms shall be **no greater than**

- **30 inches** (760 mm) above the protective surfacing.
- **18 inches** (460 mm) apart, measured edge to edge between adjacent stepping surfaces.

(This measurement will be horizontal when adjacent log steps are at the same height and it will be diagonal when adjacent logs steps are at different heights.)

The **fall height** of the log steps is the distance between the highest point of the stepping form and the protective surfacing beneath it.

The **use zone** shall extend **no less than 72 inches / 6 feet** (1830 mm) from all sides of the log steps.

The use zone of stationary equipment and other equipment may overlap.

- If the adjacent designated play surfaces of each structure are no more than 30 inches (760 mm) above the protective surface, the minimum distance between the structures shall be 72 inches / 6 feet (1830 mm).
- If the adjacent designated play surfaces of either structure are greater than 30 inches (760 mm) above the protective surface, the minimum distance between the structures shall be 108 inches / 9 feet (2740 mm).

Inspection & Maintenance:

Inspect this item before each use.

- Ensure item is stable on the ground (level surface)
- Confirm the absence of any structurally-compromising cracks
- Ensure surfaces are smooth and splinter-free
- Confirm that adequate safety surfacing surrounds the required area

General Maintenance should be performed monthly-quarterly as needed to help reduce potential injuries and extend the life of your natural product.

- Sand to remove any splinters
- Compact dirt around bases

Annual Maintenance (optional) should be performed as needed depending on your preference and local climate.

- Apply/re-apply your preferred commercial wood-protector or water-seal. This item arrives **natural** and **untreated**.
- Always check with local building codes, playground experts and wood preservation experts for the local rules and regulations and to ask what wood-protector products work best to use around children.

Surfacing

A playground should never be installed without protective surfacing of some type. ***Install this product over resilient surfacing appropriate to the safety guidelines for your area. Loose-fill should be avoided for playgrounds intended for toddlers.***

Important tips when considering loose-fill materials:

1. Loose-fill materials will compress at least 25% overtime from use and weathering.
2. Loose-fill surfacing requires frequent maintenance to ensure that surfacing levels never drop below minimum depth.
3. Good drainage is essential to maintaining loose-fill surfacing. Standing water reduces effectiveness and leads to material compaction and decomposition.
4. Never use less than 9" of loose-fill material as shallower depths are too easily displaced and compacted.
5. Engineered Wood Fiber (EWF) is the only loose-fill protective surfacing material that meets ADA/ABA accessibility guidelines.
6. Wood mulch (non-CCA) can be used as a loose-fill protective surface that does not meet ADA/ABA accessibility guidelines.



Tools Needed:

Assembly

1. Heavy rubber mallet or sledge hammer
2. Marker/pencil

Installation

1. Shovel / post hole digger / auger
2. Spade
3. Tape measure
4. Tamping post at least 2" diameter
5. Level

Materials Needed: (Not included)

Concrete: 2,500 PSI concrete, estimated 4 cubic feet, approximate bags of pre-mixed concrete:

- 7.35 - 80 lb. bags
- 10 - 60 lb. bags

Wood glue

Scrap wood for support

Flags/markers (to mark placement of footings)

Engineered Wood Fiber (or other safety surfacing)

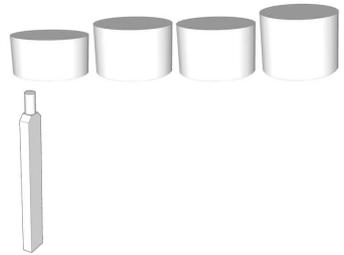
Parts List:

- 1 - 8" x 12" diameter log step
- 2 - 10" x 12" diameter log step
- 1 - 12" x 12" diameter log step
- 4 - 36" x 2" x 3" posts

Consult your local building codes prior to permanent installation. Variations in building codes, specific local development covenants, childcare licensing standards or site conditions may require modification to the installation of the Log Steps.

Allow time for the log steps to properly adjust to your local climate before assembly.

Note: Natural wood products may swell or contract depending on climate. This may make assembly more difficult.



LOG STEP ASSEMBLY

- 1 Thoroughly read and review all instructions before you begin.
- 2 Place the log steps on a flat surface with the post-holes facing upward. 'Dry-fit' or simply line up the posts with the holes on the log steps before applying glue.

Note: If you attempt to 'dry-fit' the posts, you may have a difficulty pulling them back out.

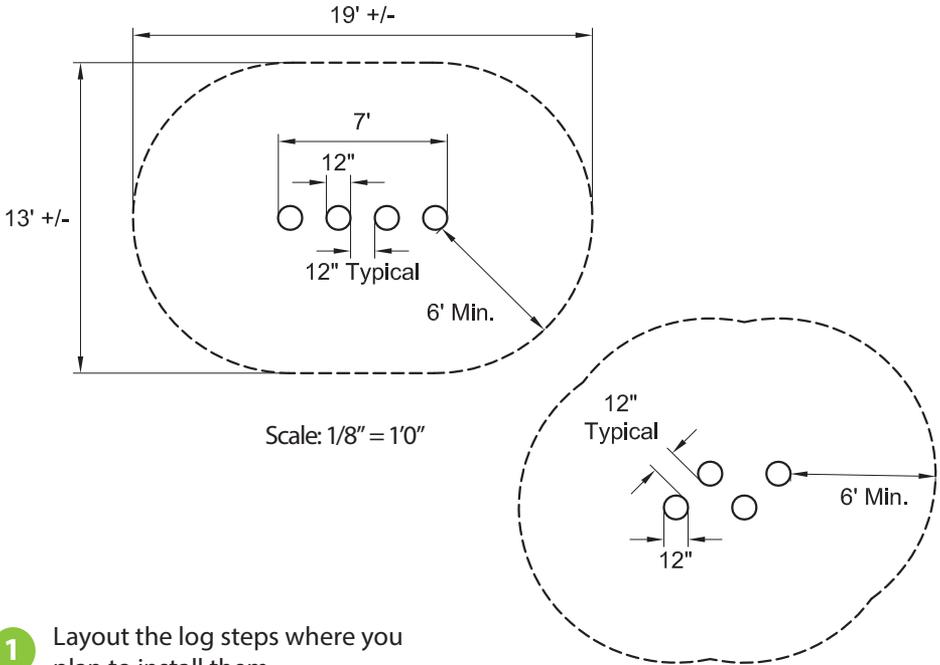


3 Add wood glue to the end of each post and in each hole. Insert posts into the holes. You may have to do this with some force, a heavy rubber mallet works well for this.

4 Wipe off excess glue and allow glue to dry according to directions on the wood glue itself.

PLOTTING THE LOCATION

Overhead use zone views are for planning purposes only. Please follow guidelines as specified by the CPSC and ASTM F1487.



1 Layout the log steps where you plan to install them.

2 Measure the distance between the edges of each adjacent step to ensure that they are the proper distance apart from each other.



For more information on Playground Safety:

CPSC Handbook for Playground Safety:

<http://www.cpsc.gov/cpscpub/pubs/325.pdf>

ASTM Playground Standards:

- **F1487:** Standard Consumer Safety Performance Specification for Playground Equipment for Public Use.
- **F2373:** Standard Consumer Safety Performance Specification for Public Use Play Equipment for Children 6 Months Through 23 Months.

Note:

ASTM recommends that the distance between stepping forms shall be **no greater than:**

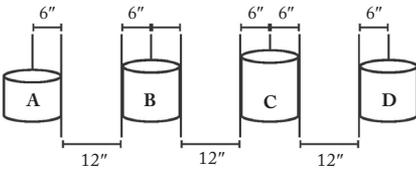
- **12 inches** (300 mm) for **Preschool-age** (ages 2-5)
- **18 inches** (460 mm) for **School-age** (ages 5-12)

measured edge to edge between adjacent stepping surfaces. This measurement will be horizontal when adjacent stepping forms are at the same height and it will be diagonal when adjacent stepping forms are at different heights.

- 3** Place markers or spray paint the center point of each log step to represent where to dig the holes for the footings.



Each log step is approximately 12" in diameter. Plan a distance of 12" between each log, making the approximate distance between markers 24".



The following formula will give you an approximate distance between each marker.

Stump	Distance from Centerpoint of Stump to Edge	+	Distance Between Steps (Adjacent Edge to Edge)	+	Distance from Centerpoint of Stump to Edge	=	Distance Between Markers
A ←→ B:	_____	+	_____	+	_____	=	_____
B ←→ C:	_____	+	_____	+	_____	=	_____
C ←→ D:	_____	+	_____	+	_____	=	_____
A ←→ B:	6"	+	12"	+	6"	=	24"
B ←→ C:	6"	+	12"	+	6"	=	24"
C ←→ D:	6"	+	12"	+	6"	=	24"

Example

PREPARING THE FOOTINGS

Refer to the following illustration as you determine the footing depth in **Steps 1-5**:

- 1 Determine the **compacted** depth of the safety surfacing you will be placing under/around the steps.

Note: CPSC recommends that you **never use less than 9 inches of loose-fill material**, except for shredded/recycled rubber (6 inches recommended). Shallower depths are too easily displaced and **compacted**. *Consider compaction after installation.

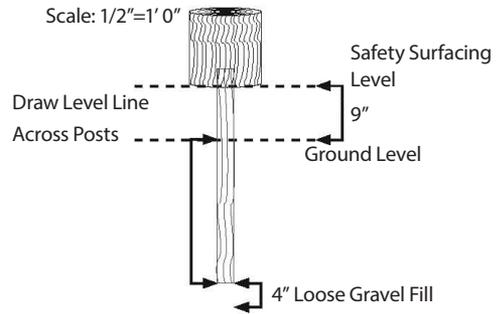
Compacted depth of the Safety Surfacing: _____

- 2 From the underside of each log step (where the post is inserted), draw a straight/level line across the other posts. This line will represent your compacted **safety surfacing level**.

- 3 Measure the distance you determined in **Step 1** down from the safety surfacing level line. Draw a straight/level line across the other posts. This line will represent the ground level.

- 4 Measure the distance from your ground level line to the end of each post.

Note: All distances should be close to the same, but if there is any variance, measuring each length separately will allow you to adjust accordingly.



A: _____ B: _____ C: _____ D: _____

5 Next, enter the number(s) from **Step 4:** above into the first column;

Add (+) the amount of loose gravel fill you will be adding under the footing to allow for drainage.

(We recommend 4 inches of loose-fill for drainage.)

Post:	Post Length from Ground Level	+	Loose Gravel Fill	=	Footing Depth
A:	_____	+	_____	=	_____
B:	_____	+	_____	=	_____
C:	_____	+	_____	=	_____
D:	_____	+	_____	=	_____

Example:

A:	24"	+	4"	=	28"
B:	24"	+	4"	=	28"
C:	24"	+	4"	=	28"
D:	24"	+	4"	=	28"

6 Using the distances measured in **Step 3** under "Plotting Your Location," place markers or spray paint to represent where to dig the holes for the footings.

7 Using the footing depths calculated in **Step 5** above, dig your footing holes at least 10" in diameter. Be sure to re-measure the spacing of each hole to ensure accuracy.



8 Using the tamping post, compact the soil at the bottom of the footing hole.

9 After conforming the proper depth of the hole, pour the required amount of loose gravel fill material into the hole *(see example diagram)*.

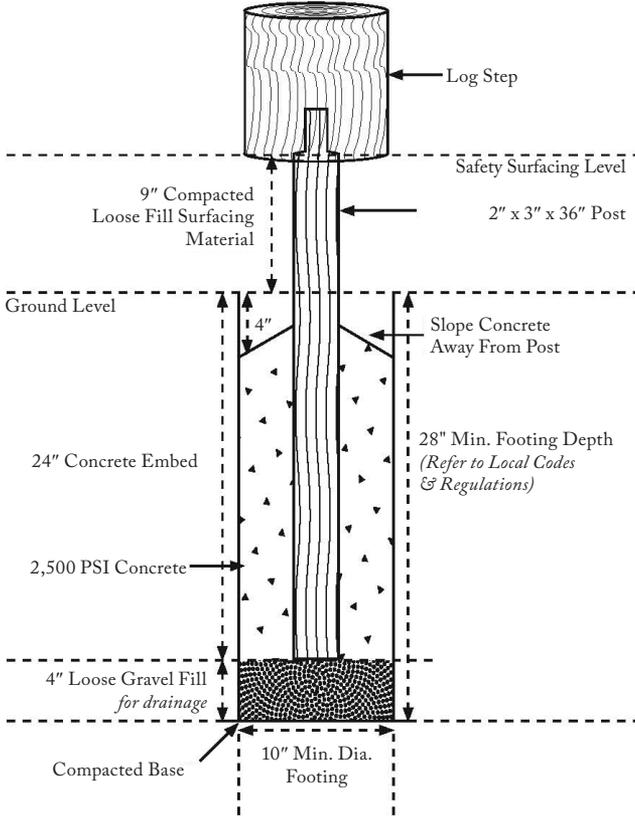


How to Begin Permanent Installation

Check weather. Make sure there is no rain forecasted for 24 hours prior to installation if you decide to use concrete footings.

PERMANENT INSTALLATION

Refer to the both diagrams on this page and the next as you permanently install the log steps in **Steps 1-9**:



- 1 After all of the footing holes have been prepared, place the posts into their respective holes. Make sure each log step is level and plumb in the footings. Use scrap wood to brace into position if necessary.



- 2 Make sure that each log step is the proper height above the ground level and safety surfacing level.



- 3 Make sure each log step is level and plumb in the footings, as well as the proper distance apart from each other. You may need to fill the holes with additional material as needed to fit post.

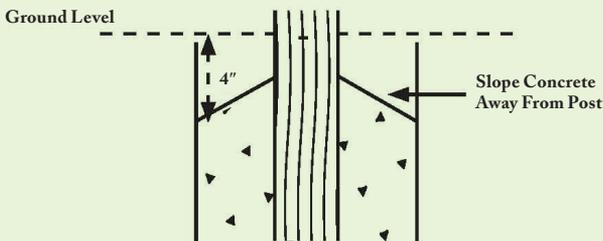


- 4 Prepare your concrete. Concrete must have a minimum rating of 2,500 psi and must be mixed per manufacturer's recommendations.

- 5 Fill each footing with concrete until approximately 3" from the top.



- 6 Smooth and slope the concrete away from the post as shown in the diagrams.



- 7 Make sure that each log step is snug and level both vertically and horizontally. It is crucial that each log step does not move and is completely secure. Use scrap wood to brace/keep the steps level if necessary.
- 8 Allow the concrete to cure per manufacturer's recommendations and local standard practices. Once dry, fill the rest of the hole with dirt and compact.
- 9 After installation is complete and concrete has been allowed to harden, install your safety surfacing around the base and throughout the use zone to the depth determined in **Step 1** under "Preparing the Footings."

Note: CPSC recommends that you never use less than **9 inches of loose-fill material**, except for shredded/recycled rubber (6 inches recommended). Shallower depths are too easily displaced and compacted.



Your Log Steps are now complete and ready to use!

Post-Installation Inspection

Check 1: The Log Steps are installed at the correct height.



Check 2: Any splinters or sharp edges have been sanded smooth.



Check 3: Concrete foundations and all fittings are secure.



Check 4: For loose-fill surfacing only: the basic level marks have been painted on the legs.



Check 5: Adequate safety surfacing and no obstructions or trip points within the equipment use zone.



Check 6: Site is clear of all tools, any assembly aids and rubbish.



Installation Record

Type of Equipment	Date Received	Date(s) Installed	Installer(s)	Contractor License #
<input type="checkbox"/> #3917 Red Cedar Log Steps				
Notes:				

Maintenance Log

Type of Maintenance	Date	Performed By
Notes:		
Notes:		
Notes:		
Notes:		

Important Facts About Natural Wood Products

Nature Explore field-tested components are made of natural materials that bring children in close contact with the beautiful patterns and colors of nature. Due to the nature of raw and untreated wood, you will notice graining, knots, checking (a natural cracking process that occurs as wood releases moisture across the annual growth rings), and in rare instances, insects. This is not a defect in the product, but a natural process that should be expected. Additionally, unfinished wood will naturally develop a beautiful silvery-gray patina over time.

Below are some examples of what you may encounter and can expect with your order:



Nature Explore items such as Tree Cookies, Natural Balance Beams, Marimbas, At-Ease Benches, etc. are natural, untreated wood products that require regularly scheduled, routine maintenance in order to maintain safety and extend the life of the item. Some items will arrive with an initial coat of sealant while others are left untreated (please refer to product overview & specifications). It is our recommendation that you apply an initial sealant and maintain a schedule of reapplication annually to biannually to extend the life of your product. When considering treatment options we advise seeking the expertise of local wood workers, lumber yards, general contractors, etc. to understand which options are most effective and safe for your area. Routine sanding of the tops, sides and interior (if applicable) surfaces of the item will minimize splinters, reduce the chance of mildew and extend the life of your product. As your natural wood product becomes acclimated to your local environment, and sometimes even occurring in the transit process, a mildew discoloration will appear. You can reduce the risk of continued mildewing by making sure your item is installed on a surface with adequate drainage such as mulch or gravel. Installing or placement directly on grass surfaces is not recommended as it allows moisture to be trapped underneath.

Nature Explore Natural Products are designed to bring children closer to nature and help them develop life-long learning skills. To ensure safety and effectiveness, please be sure to follow the instructions for assembly, installation, warnings, and maintenance. Failure to follow all of the instructions will void any warranty offer. Keep in mind, even properly installed Nature Explore Natural Products can present hazards to children without adequate supervision. Also be sure to check with any applicable building codes which may pertain to your outdoor space and/or use of these products.

Depending on the location and context of the outdoor classroom, the supervisors may be paid professionals (full-time park or school/child care facility staff), paid seasonal workers (college or high school students), volunteers (PTA members), or the parents of the children playing in the outdoor classroom. Ultimately the overall safety of the space depends on the quality of the supervisor's knowledge of safe play behavior. Therefore, supervisors should understand the basics of safety in an outdoor classroom.

Outdoor classroom supervisors should be aware that not all equipment and natural products are appropriate for all children who may use the outdoor classroom. Posted signs or labels indicating the appropriate age of the users should be checked before play begins, and supervisors should direct children to equipment and natural products appropriate for their age. It is also very important to recognize that younger children require more attentive supervision than older children do.

Building Codes:

Variations in building codes, specific local development covenants, or site conditions may require modification to the installation of the natural product. Outdoor classroom owners are ultimately responsible for complying with all applicable permits, building codes and other regulatory requirements, and should review their outdoor classroom with local building inspectors. All appropriate building permits should be obtained prior to starting installation.

Liability:

Nature Explore shall have no liability or responsibility for actions or inaction in connection with any Nature Explore Natural Product or any damage or liability that arises during the construction and/or use. Always read and observe all safety precautions provided by the Consumer Product Safety Council regarding toy safety, playground safety, and any other applicable programs. Likewise, always read and observe all safety precautions provided by any tool or equipment manufacturer consulted during installation.