Set each armrest in position on the frame, with its wide front end to the arm bracket. Each armrest should have three holes in the armrest legs to accept three chains that are bolted to the 2x4 uprights. To attach the chains, use 3/4-inch-diameter bolts with 3/4-inch-diameter chain holes through each armrest. In each bolt hole, insert a 3/4-inch-diameter by 2-inch carriage bolt. Tighten each bolt with a wrench and locknut. Then, pass a length of chain through the arm hole and slip the first link over the end of the bolt. Add another washer and locknut to secure the chain. Repeat this procedure for the remaining three chains.

To hang the swing from a standard 8-foot-high ceiling, you will need about 18 to 22 inches above the porch floor (figure). To avoid serious injury, it is very important that you bolt the chains to solid framing members, such as a ceiling joist or rafters. Never hang the swing by sweeping into plywood sheathing or thin ceiling planks. For the strongest connection, bore a hole through the middle of the framing member and attach the chains with carriage-bolt or threaded-screw assemblies. Another option is to bore pilot holes into the bottom edge of the framing members and attach the chains with hanging lag screws or masonry screws.

Tools you will need: Tape measure; combination square; cordless drill/driver or electric drill; power motor or saw; hand saw; saber saw with adjustable blade; assorted drill bits; countersink bit; adjustable wrenches; 3/8- and 5/16-inch-diameter spade bits; hammer; orbital sander or sanding block; 100- and 120-grit sandpaper; 7/8-inch-diameter plug cutter and pencil compass. Optional: wrench with 5/16-inch-radius roundover bit.

**Materials for Adirondack Swing**

<table>
<thead>
<tr>
<th>Quantity</th>
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<th>Length</th>
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</tr>
<tr>
<td>Arm brackets</td>
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**Adirondack Swing**

Description: A simple yet sturdy swing frame that is easy to build. The frame is made of 1x4s and 2x4s. The seat is suspended from chains. The swing has a classic Adirondack chair design, with a tall back and wide seat. The frame is constructed using a combination of 2x4s and 1x4s for the main structural elements. The seat is made of a single 1x4 and is suspended from the frame using chains. The back is made of two 2x4s, and the arms are made of 1x3s.

**Construction Notes**

- The frame is assembled using 2 1/2- and 3 1/2-inch screws inserted into pre-drilled holes.
- The chains are attached to the frame using 3/4-inch-diameter carriage bolts and nuts.
- The swing is suspended from the chains using 3/4-inch-diameter chain links.
- The frame is designed to be sturdy and weather-resistant.

**Finishes**

Redwood finishes are available in a variety of options, including clear finishes, semi-transparent stains, and solid-color stains. The Redwood Association recommends using a clear finish to enhance the natural beauty of the wood. Semi-transparent stains can also be used, but should not be used over a solid-color stain.

**Materials**

- Framing: 2x4s and 1x4s
- Chain: 3/4-inch-diameter chain links
- Screw: 2 1/2-inch and 3 1/2-inch screws
- Arm brackets: 2x4s
- Armrest: 1x3s
- Back rail: 1x4s
- Seat slats: 1x4s

**Tools**

- Cordless drill/driver or electric drill
- Power miter saw or hand saw
- Sandpaper: 100- and 120-grit
- Chain hardware: Chain links and chain nuts

**Contact Information**

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Fax 415 382-0651
www.calredwood.org
**Adirondack Swing**

Enjoy the art of relaxation with this easy-to-build porch swing. Modelled after the classic Adirondack lawn chair, this two-person swing features rounded wooden slats and a comfortable slant-back design. This style swing is typically installed on a covered porch or gazebo. It can also be hung beneath a second-story deck or from a large tree branch.

To make certain the swing provides many years of enjoyment, build it with an all-heartwood grade of redwood. Deck Heart or Construction Heart. These grades provide maximum durability many years of enjoyment, build it with.

To make certain the swing provides
to support the swing.

1. **Back slats** The doublewide back of the swing is made up of 10 redwood 1x4 slats, which are cut to resemble two side-by-side Adirondack chairs. Cut the six center slats to 36 inches long, and the four end ones to 50 inches long. Also, cut to length the two upper back rails and the middle back rail. These two slats get screwed across the rear of the slats. Bend cut the upper edge of the middle back rail to 15° to support the swing’s armrests at the back. Round off the bottom corners of the rail with a 1/4 inch radius.

2. **Seat supports** The 1x4 seat supports are specially shaped to make the comfortable contoured seat and slatted back. Refer to the seat-support pattern (shown below) for specific details. Note that the back end of each seat support is relieved to a 15° angle and a portion of the upper edge is trimmed away to accommodate the five 1x4 slats.

3. **Uprights** Cut the two front uprights from 2x4, making sure that both ends of each board are perfectly square. Then rough cut the two rear uprights to about 87 1/2 inches long. Then cut the three 1x4 seat supports point toward the rear of the frame. Then, screw the back rail to 15° and washers

4. **Armrests** Cut the top 27 1/2-inch-long armrests from a redwood 1x6. Refer to the armrest detail illustrations, which shows how they taper to only 1 1/2 inches wide at the back end. Cut the large, rounded front end with a sabre saw and sand them smooth with 120-grit sandpaper. For a little added comfort, ease the top edges of the armrests using a router filled with a 1/2-inch roundover bit, or an orbital finishing sander and 100-grit sandpaper.

Measure from 9 inches from the top of the center slats and attach the upper back rails. Drive two 1 1/4-inch screws through the rails and into each slat, be careful not to overtighten the screws or their sharp points will poke through the other side. The middle back rail attaches 11 1/4 inches up from the bottom edge of the slats, with its beveled edge facing toward the top of the slats. The rail should extend beyond the slats an equal amount at each end. Use 1 1/4-inch screws.

**ASSEMBLE THE SWING**

Arrange five back slats—one chair back—on a flat surface and space them equally. Secure or weight the slats to keep them aligned and square. Paint the chair backs to accommodate the frame and seat support later.

BEND THE SWING FRAME

This doublewide swing is built primarily of 1x4 and 1x6; the front and rear uppers are cut from 2x4 for maximum strength. Start by assembling the frame of the swing to form the seat section. Attach the four 2x4 uppers, then begins installing the slats that form the back and the seat. Remember to cut and measure as you go, using the Materials List as a guide. Patience is required at this point with crosswise-placed or nailed 2x4s to the ends or back rails. When nail 2x4s to the ends or back rails. When

1. **Seat supports** Start by making the front rail and lower back rail; cut two pieces to 47 3/8 inches long. Then cut the three 1x4 seat supports that connect the front rail to the lower back rail. Rough cut these three supports to 20 inches long.

2. **Seat supports** Start by making the front rail and lower back rail; cut two pieces to 47 3/8 inches long. Then cut the three 1x4 seat supports that connect the front rail to the lower back rail. Rough cut these three supports to 20 inches long.
This redwood swing is built primarily of 1x4s and 1x6s; the front and rear uprights are cut from 2x4s for maximum strength. Start by assembling the frame of the swing to form the seat section. Attach the four 2x4 spindles, then begin installing the slats that form the back and the seat.

Remember to cut and measure as you go, using the Materials List as a guide. Fasten together all the parts with corrosion-resistant stainless steel or hot-dipped galvanized screws. To prevent the screws from splitting the wood, predrill pilot holes first, especially at board ends.

1. Seat frame Start by making the front rail and lower back rail, 19” long and 13 3/4” wide. Then cut the three seat supports that connect the front rail to the lower back rail. Rough-cut these three supports to 20 inches long.

2. Seat supports The 1x4 seat supports are specially shaped to create the comfortable contoured seat and slatted back. Refer to the seat-support pattern (shown below) for specific details. Note that the back end of each seat support is oriented at a 15° angle and a portion of the upper edge is trimmed away to accommodate the five 1x4 slats.

3. Uprights Cut the two front uprights from 2x4, making sure that both ends of each board are perfectly square. Then cut the two rear uprights to about 87 1/4” long. These three 1x4s are specially shaped to form the frame of the swing to the rear of the frame. They are cut to length with a 3 1/8” radius. You can use a compass or pencil and string to make the exact radius for cutting. Use the curved slats as templates for cutting the curves in all the remaining back slats, including the four shorter side slats.

4. Armrests Cut the top 13” wide x 12” long armrests from a newel post. Refer to the armrest detail illustration, which shows how they taper to only 3 1/2” wide at the back end. Cut the large, rounded front ends with a saber saw and sand them smooth with 120-grit sandpaper. For a little added comfort, ease the top edges of the armrests using a router fitted with a 3/8” roundover bit, or an orbital sander, finishing 100- and 150-grit sandpaper.

2. Assemble the framework Build the swing frame by attaching the rear rail to the two front supports. Hold the vertical slats upright with the ends of the front rail and attach the bolts for the remaining seat supports in the middle of the frame by first securing them through the front rail and then through the lower back rail.

3. Assemble the swing back Assemble the swing back as follows: Measure from 8 inches from the top of the center slats and attach the upper back rails. Drive two 1 1/4” screws through the rails and into each slat; be careful not to overtighten the screws or their shank points will break through the other side. The middle back rail attaches 15 1/8” up from the front bottom of the slats, with its beveled edge facing toward the top of the slats. The rear should extend beyond the frame by an equal amount at each end. Use 1 1/4” screws.

3. Install the swing back Set the assembled swing back into the frame. Slip it between the rear uprights and pull it back against the lower back rail. The bottom ends of the slats should form flush with the bottom of the lower back rail. Secure the back by driving two 2 1/4” screws through the ends of the middle rail and into the upper rails. Check to make certain the ends of the middle rail are even with the tops of the uprights. Now, switch back to 1 1/4” screws and fasten the back end of the slats to the lower back rail. Again, preload pilot holes, if necessary, to prevent the screws from splitting the slats.

4. Assemble the seat supports Arrange five back slats—one “chair back”—on a flat surface and space them equally. Secure or weight the slats to keep them aligned and square. Mark and drill the centerlines of the radius for the curved ends of the center frame; or, longer slats, use a compass or pencil and string to make the radius lines for cutting. Use the curved slats as templates for cutting the curves in all the remaining slats, including the four shorter side slats. Sand the edges smooth with 120-grit sandpaper.

2. Assemble the swing back Now, lay all ten back slats face down on a clean surface, in order and spaced equally apart, secure or weight them as before to keep them aligned and square. Leave at least a 1/4 inch space between the chair back to accommodate the center seat support later. If you choose to countersink the screws for the following three back rail attachments, you must use screws that are at least 1/4 inch shorter than indicated here.
Adirondack Swing

Enjoy the art of relaxation with this easy-to-build porch swing. Modeled after the classic Adirondack lawn chair, this two-person swing features rounded wooden slats and a comfortable slant-back design. This style swing is typically installed on a covered porch or gazebo. It can also be hung beneath a second-story deck or from a large tree branch.

To make certain the swing provides many years of enjoyment, build it with an all-heartwood grade of redwood. Deck吼t or Construction Heart. These grades provide maximum durability and are easy to work with.

B U I L D T H E S W I N G F R A M E

This redwood swing is built primarily of 1x4s and 1x6s; the front and rear uprights are cut from 2x4s for maximum strength. Start by assembling the frame of the swing to form the seat section. Attach the four 2x4 sprays, then begin installing the slats that form the back and the seat. Remember to cut and measure as you go, using the Materials List as a guide. Part 1 includes all the parts with corrosion-resistant stainless-steel or hot-dipped galvanized screws. To prevent the screws from splitting the wood, predrill pilot holes first, especially at board ends. Crosscut all redwood surface holes with a 1 1⁄4-inch-diameter spade bit to a depth of about 1 1⁄8 inch. Then fill the holes with 1x4-diameter redwood plugs, which you can make with a plug cutter.

1. Back slats

Start by making the front rail and lower back rail, cut two 36-inch boards long. Then cut the four 36-inch seat supports that connect the front rail to the lower back rail. Rough-cut these three components to 20 inches long.

How to cut the seat supports. Take one of the 20-inch-long 1x4s and draw the grid of 2-inch squares onto its surface, as shown in the seat-support pattern. Then measure 19 inches from one end and mark the 15° cut. Next, using the pattern as a guide, mark the cut line through the squares in the grid. Cut along the segmented line with a saber saw and lightly sand the edges smooth. Now, use this support as a template to mark the remaining two. That will ensure that all three supports will be identical.

2. Seat supports

The 1x4 seat supports are specially shaped to create the comfortable contoured seat and slatted back. Refer to the seat-support pattern (shown below) for specific details. Note that the back end of each seat support is oriented to a 15° angle and a portion of the upper edge is trimmed away to accommodate the five 1x4 slats.

3. Uprights

Cut the two front uprights from 2x4s, making sure that both ends of each board are perfectly square. Then rough-cut the two rear uprights to about 14 1⁄2 inches. Note both ends of these 2x4 pieces to 15°. All of the uprights should finish at a height of 13 5⁄8 inches.

4. Assemble the frame

Begin assembling the swing's frame by securing the front rail to the two front sprays. Hold the vertical spray flush, with the ends of the front rail and attach each one with two 2 1⁄4-inch screws. Follow the same procedure to attach the lower back rail to the rear sprays. View the seating frame. Then, screw the back ends of each seat support into the inside of the rear uprights. Now use 2 1⁄4-inch screws to install the remaining seat support in the middle of the frame by first securing through the front rail and then through the lower back rail.

Arrange five back slats—one “chair back”—on a flat surface and space them equally. Secure or weight the slats to keep them aligned and square. Paint or stain the bottom of the rails and into each slat: be careful not to overdrive the screws from splitting the slats.

ASSEMBLE T H E S W I N G

1. Back slats

The doublewide back of the swing is made up of 10 redwood 1x4 slats, which are cut to resemble two side-by-side Adirondack chairs. Cut the six center slats to 19 inches long, and the four end slats to 50 inches long. Also, cut to length the two upper back rails and the middle back rail. These three 1x4s get secured across the rear of the slats. Bend cut the upper edge of the middle back rail to 15° to support the swing’s armrests at the back. Round off all the bottom corners of the rail with a 1 1⁄4-inch radius.

2. Seat supports

Seat supports will be identical.

3. Uprights

Cut the two front and two rear uprights from 2x4s, making sure that both ends of each board are perfectly square. Then rough-cut the two rear uprights to about 14 1⁄2 inches. Note both ends of these 2x4 pieces to 15°. All of the uprights should finish at a height of 13 5⁄8 inches.

4. Assemble the frame

Begin assembling the swing’s frame by securing the front rail to the two front sprays. Hold the vertical sprays flush, with the ends of the front rail and attach each one with two 2 1⁄4-inch screws. Follow the same procedure to attach the lower back rail to the rear sprays. Now, screw a 1x4 seat support to the inside surface of each front upright using 3 1⁄2-inch screws. Then, unscrew the 2 1⁄4-inch screws from the supports point toward the rear of the frame. Then, screw the back ends of each seat support into the inside of the rear uprights. Now use 2 1⁄4-inch screws to install the remaining seat support in the middle of the frame by first securing through the front rail and then through the lower back rail.

Arrange five back slats—one “chair back”—on a flat surface and space them equally. Secure or weight the slats to keep them aligned and square. Paint or stain the bottom of the rails and into each slat: be careful not to overdrive the screws from splitting the slats.

Measure from 8 inches from the top of the center slats and attach the upper back rails. Drive two 1 3⁄4-inch screws through the rails and into each slat, be careful not to overdrive the screws or their sharp points will jut through the other side. The middle back rail attaches 15 1⁄8 inches up from the bottom ends of the slats, with its beveled edge facing toward the top of the slats. The rail should extend beyond the slats by an equal amount at each end. Use the 1x4-inch screws.

5. Install the swing back

Set the assembled swing back into the frame. Slip it between the rear uprights and place it back against the lower back rail. The bottom ends of the slats should butt on the frames with the bottom edge facing toward the top of the slats.

6. Armrests

Cut the tops 27 1⁄2-inch-long armrests from a redwood 1x6. Refer to the armrest detail illustrations, which shows how they taper to only 3 inches wide at the back end. Cut the large, rounded front ends with a 1 3⁄4-inch-radius bit, or an orbital finishing sander and 100-grit sandpaper.

Cut the two short arm brackets from a 1x6. Hold these brackets flat and cut the tops of the front uprights and attach them by driving two 2 1⁄4-inch screws through from the inside of the 2x4 uprights.
5. Seat slats. Next, cut five 1x4 slats for the seat of the swing. Note that the front seat slat is 3 inches longer than the other four slats because it wraps around the front upright. Glue a 1 1/2 by 2 1/2-inch strip into both ends of the front seat slat to allow it to fit around the 2x4 uprights (see illustration). Again, use the router and roundover bit or orbital sander, if desired, to soften the top edge of the front seat slat. Secure the front seat slat to the three seat supports using 2 1/2-inch screws.

6. Install the seat slats. Set the remaining four seat slats onto the frame and space them evenly. Check to make sure both ends of each slat is flush with the outside of the seat supports. Secure each slat with six 1 1/2-inch screws. There should be a minimum of 3/4 inch space between the last seat slat and the slats of the back. This space will allow rain and debris to wash through to the ground and not collect on the seat.

7. Apply a finish. Redwood accepts a wide variety of wood finishes. Regardless of which one you choose, be sure it's an exterior-grade finish. Begin by sanding the wood smoothly either by hand or with an orbital finishing sander. Start with 100-grit sandpaper and sand all surfaces. If you're sanding by hand, be certain to sand with, not across, the wood grain. Sweep the sandpaper and sand all surfaces. If you re-sanding by hand, wait 24 hours before adding another coat of finish or begin the sanding process. Repeat this procedure for the remaining three slats.

9. Hang the swing. The seat of the swing should be suspended about 20 1/2 to 22 inches above the porch floor. To avoid serious injury, it's very important that you bolt the chains to solid framing members, such as a ceiling joist or roof truss. Never hang the swing by stretching into plywood sheathing or thin ceiling planks. For the strongest connection, bore a hole through the middle of the framing member and attach the chains with carriage-bolts or threaded eyebolts. Another option is to bore pilot holes into the bottom edge of the framing members and attach the chains with hanging lag screws or eye screws. Never hang the swing by stretching into plywood sheathing or thin ceiling planks.

Tools you will need: Tape measure, combination square, cordless drill or electric drill, power screw gun or hand screw, saws with adjustable blade, serrated wood-dimpling bit, countersink bit, adjustable wrench, 3/8- and 1/4-inch diameter round tenons, hammer, orbital sander or sanding block, 100- and 120-grit sandpaper, 7/8-inch diameter plug cutter and pencil compass. Optional: router with 1 1/2-inch-radius roundover bit.

8. Add the chains. As mentioned earlier, the swing is suspended from four chains that are bolted to the 2x4 uprights. To attach the chains, start by boring two 3/4-inch-diameter holes through each armrest, as shown in the armrest illustration (above). Next, bore a 3/8-inch-diameter hole through each slat. Locate these holes three inches directly below the chain holes in the armrest. To hang the swing from a standard 8-foot high ceiling, you'll need four eight-foot lengths of No. 3/0 chain. Have the chains cut to length at the hardware store. In each bolt hole, insert a 3/8-inch-diameter by 3/4-inch carriage bolt. Tighten each bolt with a wrench and locknut. Then, pass a length of chain through the hole in the armrest and slip the first link over the end of the bolt. Add another washer and locknut to secure the chain. Repeat this procedure for the remaining three chains.

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Sierra Pacific Stone
Adirondack Chair

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Portola Penetrers
Sierra Pacific Stone
Adirondack Chair

Redwood
For beauty and performance, redwood is naturally superior to other woods. That's why it's the first choice for decks, fences and most outdoor projects. Redwood retains its beauty outdoors, shrinks and swells less than other woods and is less likely to warp, split, check or cup. With relatively little or no pitch, redwood is easy to drill, cut and shape. Redwood heartwood has natural durability and resistance to insects and will last longer outdoors than most woods.

Grades
The knotty grade ranges of redwood are ideal for outdoor projects. These grades are beautiful, durable and economical.

Construction Heart
Most beautiful wood grain color or ‘heartwood’ grade. Ideal for decks, fence boards, rails and above-ground uses.

Construction Common
Most popular. Ideal for beam, joists and ground contact uses.

Merchantable Heart
Most beautiful wood grain color or ‘heartwood’ grade. Ideal for decks, fence boards, rails and above-ground uses.

Merchantable Common
Most popular. Ideal for beam, joists and ground contact uses.

Merchandising
Redwood accepts finishes better than most woods. Some high-brightness redwood’s natural beauty, bringing out the color and the grain. Others help the wood harmonize or contrast with surrounding structures. Read the labels on all finish products before using.

No-finish option
Redwood performs better than most woods if left unfinished. This no-maintenance option will result in redwood weathering to a soft driftwood gray.

Clear water repellent finish is recommended to stabilize the color at new.

Semi-transparent stains in “redwood” shades tint the wood without hiding the grain. Solid-color stains or paints should be applied over compatible oil-based primers.

Fasteners
Use only rust-resistant hardware such as aluminum, stainless steel or top-quality hot-dipped galvanized screws or nails. Ordinary nails and screws will cause stains.
Set each armrest in position on the frame, with its wide front end set 1 pound 2 1⁄2 inches above the floor on the framing members and screw to the armrests. In each bolt hole, insert a 3⁄8-inch-diameter bolt hole through each armrest. For the strongest connection, bore a hole through the middle of the armrests and attach the chains with carriage bolts and washers. Another option is to bore pilot holes through the metal outstanding end of the bolt. Add another washer and locknut to secure the chain. Repeat this procedure for the remaining three armrests.

Hang the swing

The seat of the swing should be suspended about 20 to 22 inches above the porch floor. To avoid serious injury, it is very important that you bind the chains to solid framing members, such as a ceiling beam or rafter. Never hang the swing by securing into plywood sheathing or thin ceiling planks. For the strongest connection, bore a hole through the middle of the framing members and attach the chains with carriage bolts or threaded eyebolts. Another option is to bore pilot holes through the metal outstanding end of the bolt. Add another washer and locknut to secure the chains. Repeat this procedure for the remaining three chains.

Remove all heartwood and con-