

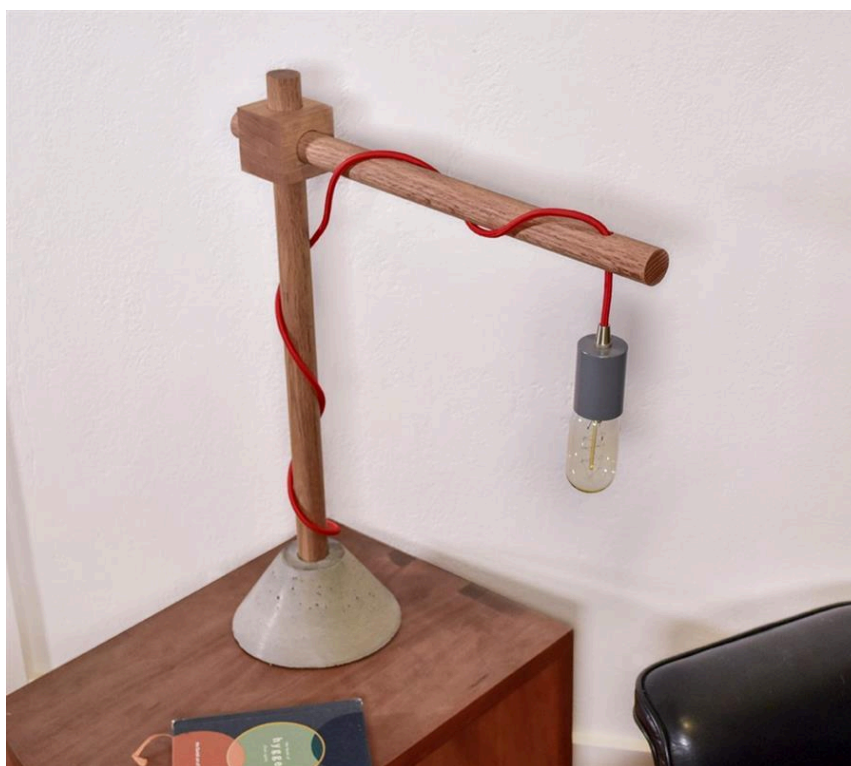
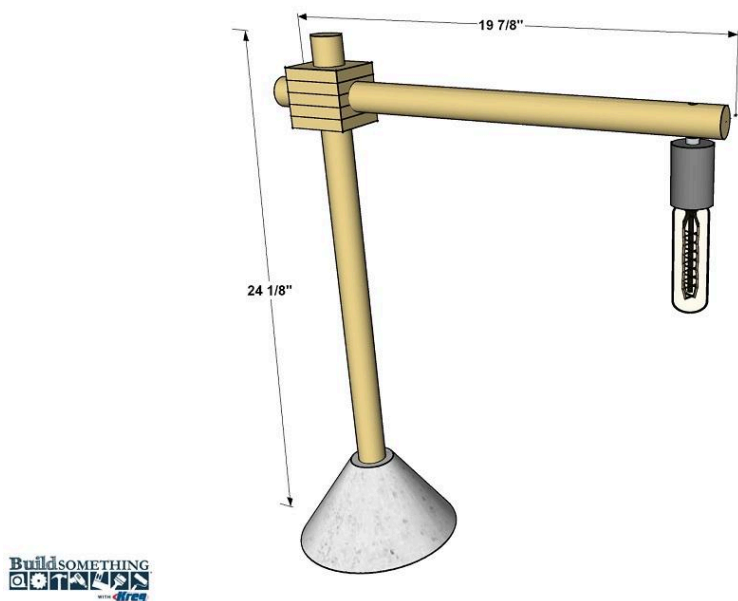
Table Lamp with Concrete Base

By **Kreg Tool**

Difficulty

Moderate

This unique table lamp provides accent lighting with style. It's made from a couple of dowels plus a 1/2" hobby board, and it features a decorative bulb and colorful cord. The base is made by casting concrete—the type usually used for making countertops—using an ordinary plastic funnel as the form.



Tools

Other Tools

- Miter Saw
- Drill (cordless)
- Glue Gun
- Sander
- Tape Measure

Materials

Wood Products

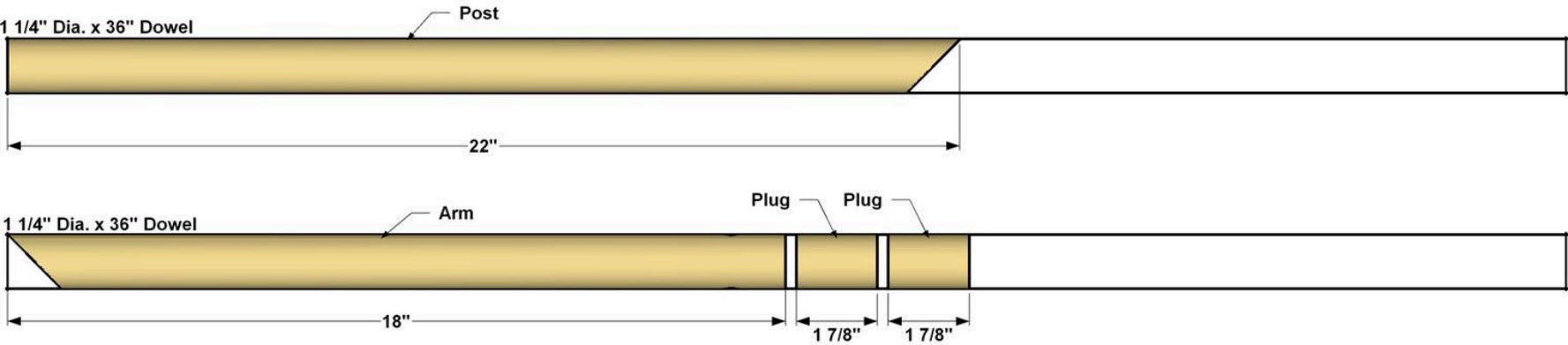
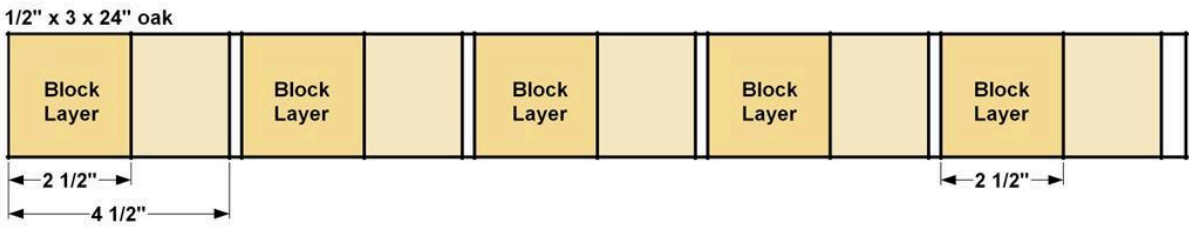
- 2 Oak Dowel , 1 1/4" , 36"
- 1 Board , 1/2" Thick , 24"

Hardware & Supplies

- 1 Casting Concrete Mix
- 1 8"-diameter Plastic Funnel
- 1 Wood Glue
- 1 Felt Fabric
- 1 Lamp Cord (We Purchased 12 Feet)
- 1 Socket
- 1 Socket Cover
- 1 Cord Grip
- 1 Thumb Switch
- 1 Cord Plug End
- 1 Tesla Light Bulb

Cut List & Parts

- 1 Base , Varies In Size And Shape
- 1 Post , 1 1/4" X 22" Oak Dowel
- 1 Arm , 1 1/4" X 18" Oak Dowel
- 2 Plug , 1 1/4" X 1 7/8"
- 4 Block , 1/2" X 2 1/2" X 2 1/2" (Initially Cut To 4 1/2" Rough Length)

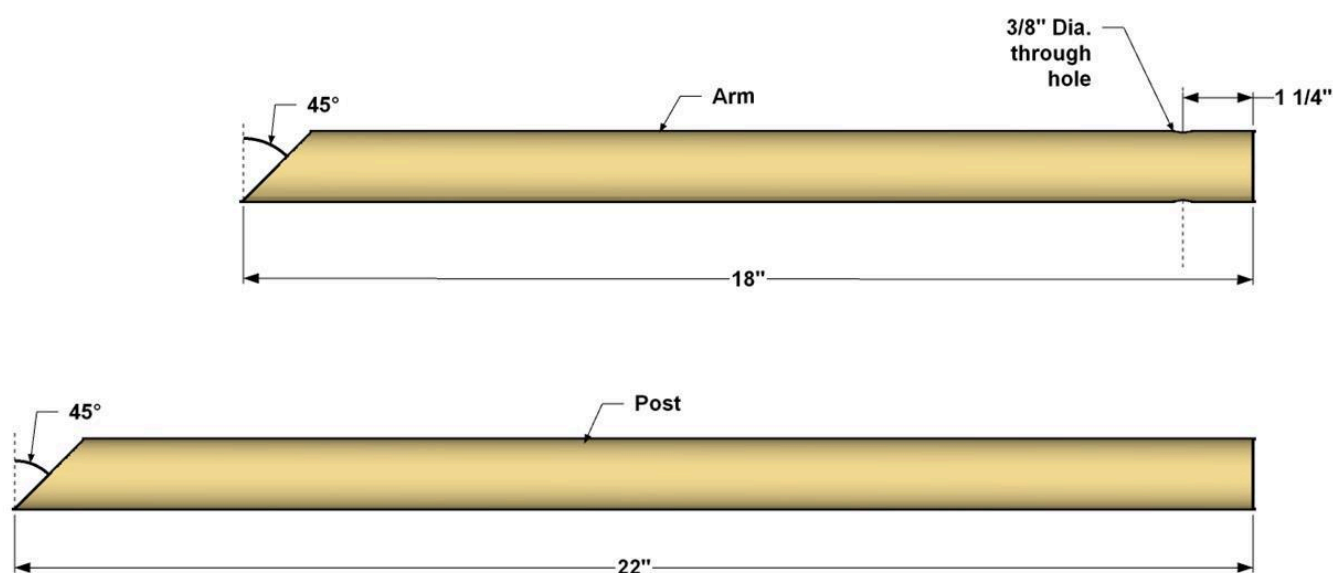


Directions

1

Make the Post, Arm, and Plugs

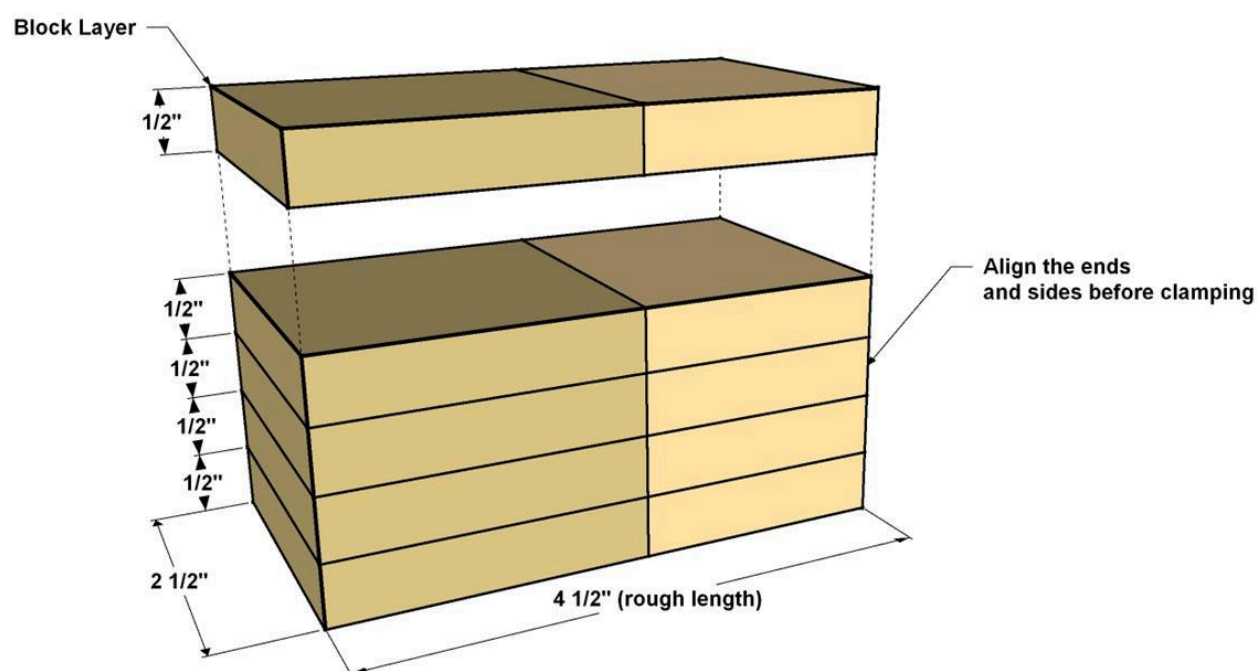
Lay out the length of the Post on a 1 1/4"-diameter dowel, as shown in the cutting diagram. Then, cut the Post to its final length of 22" by cutting the end at a 45° angle. From a second 1 1/4"-diameter dowel, cut the Arm to length, mitering one end at 45°, as shown in the cutting diagram. Then cut two Plugs to length. In the Arm only, drill a hole near the non-mitered end. Make sure the miter is positioned as shown before you drill the hole.



2

Glue up the Block

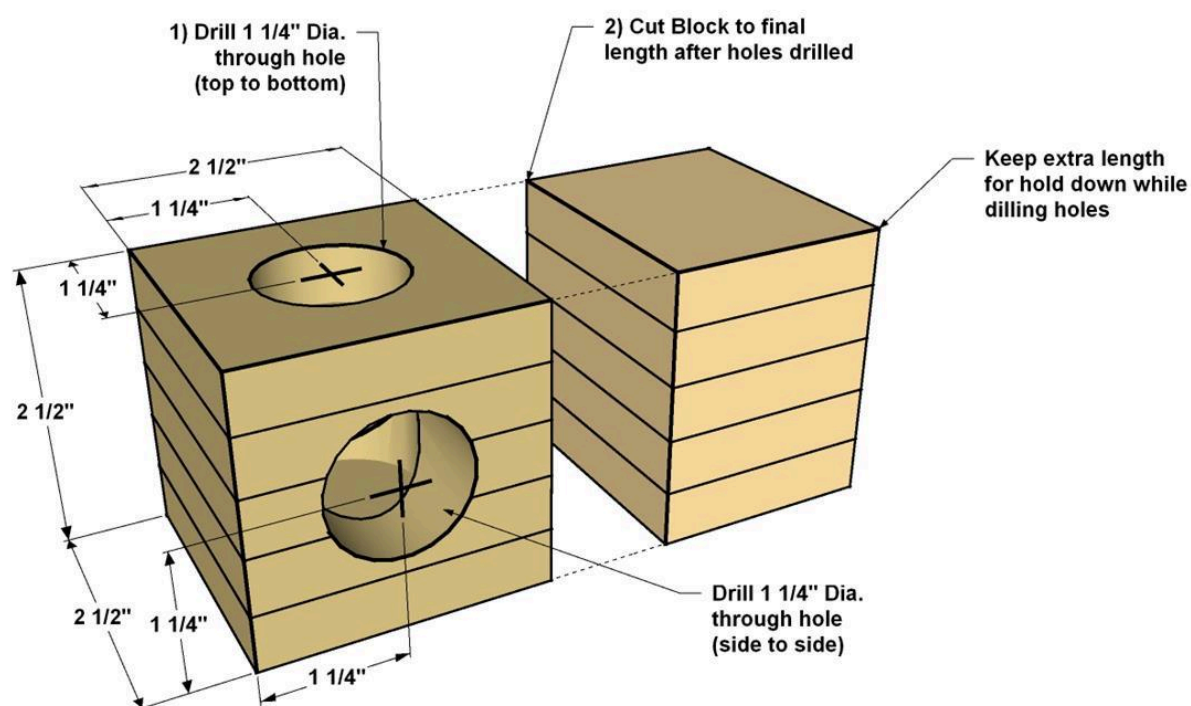
Cut a 1/2" x 3 x 24" (2 1/2" actual width) board into five sections, each 4 1/2"-long. Apply glue to one face of four of the blocks, and then stack them together as shown. Align the edges and ends of the pieces, and then clamp them together. When the glue has dried, remove the clamps and clean any glue residue off. Sand the edges and ends smooth.



3

Drill the Holes

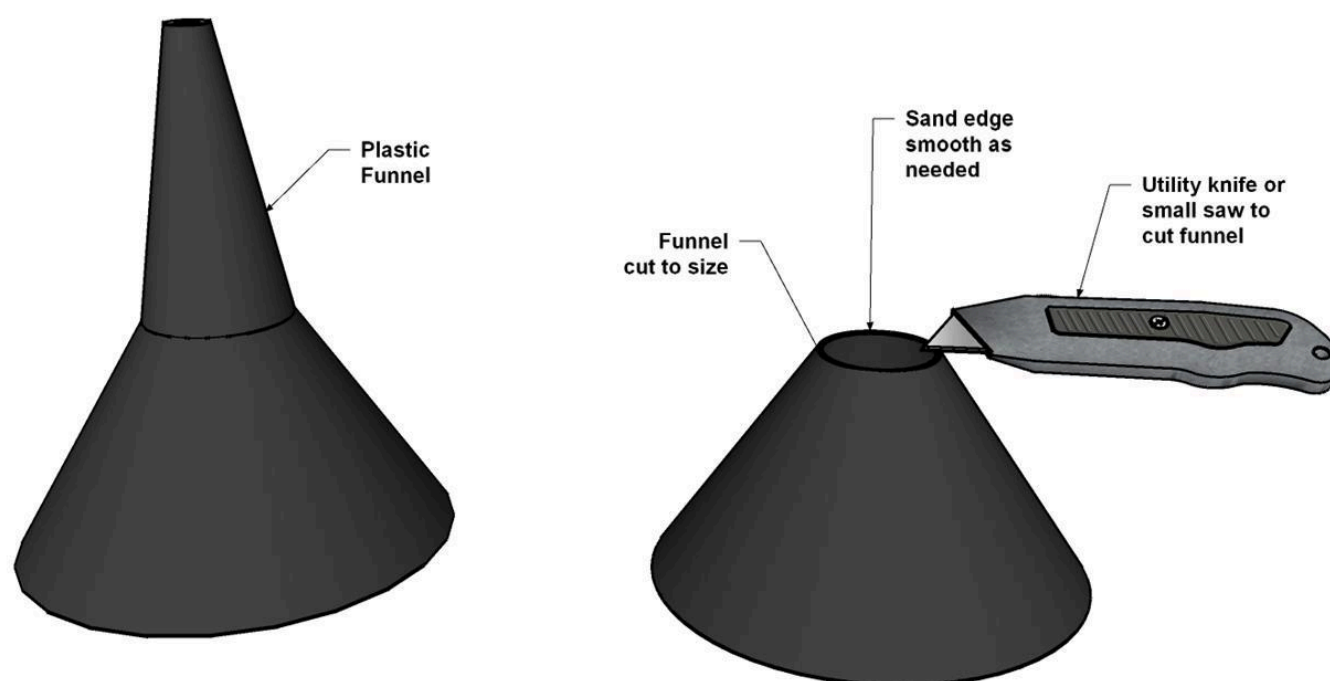
Place the Block on a scrap board and secure it to a sturdy work surface. Lay out the top hole at the location shown. Drill a hole through the Block. You need to make sure the hole is perpendicular to the face of the Block. If could use a drill press, or a portable drill guide, as shown in the How-To below. Next, rotate the Block 90° so the glued-up edge is facing up. Lay out another hole and carefully drill through the block again, so that this hole intersects the first hole. Finally, cut the Block to the final length, as shown.



4

Make the Form

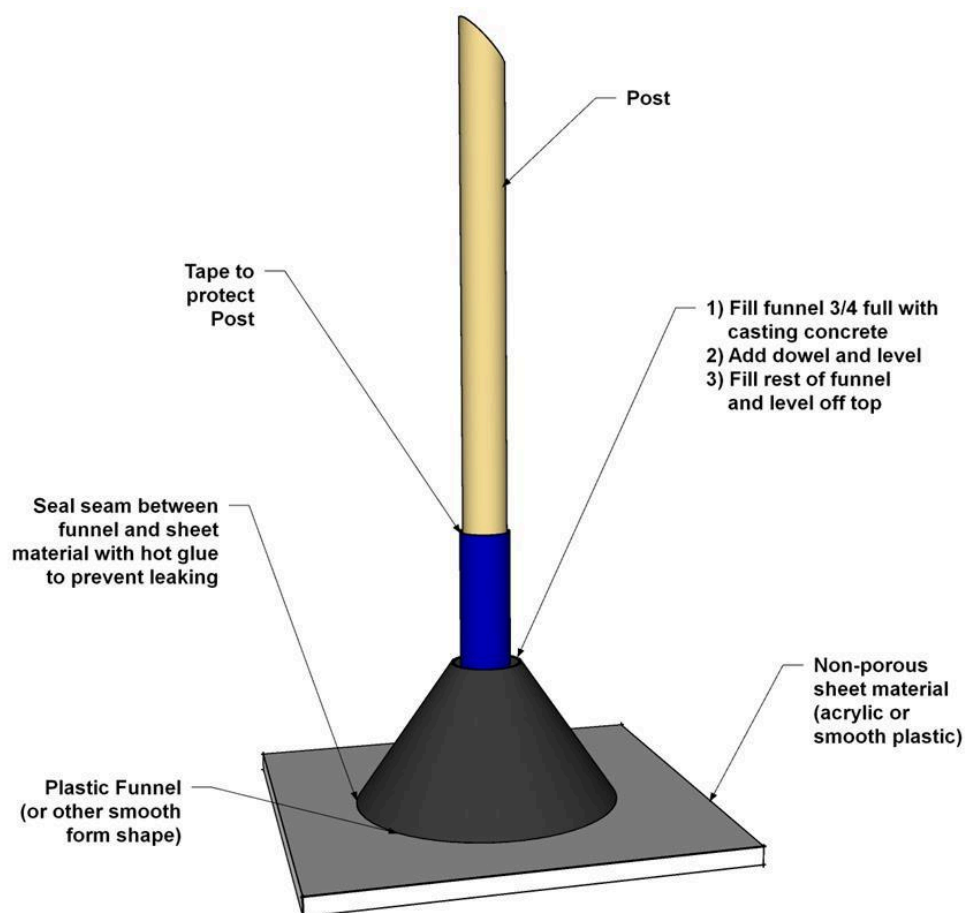
To cast the base for the lamp, we used an ordinary 8" plastic funnel, which you can find in any hardware store. To make sure the lamp won't tip over when it's assembled, we recommend the base be no smaller. Using a utility knife or a small hand saw, cut the narrow part of the funnel off, making sure to leave an opening larger than the diameter of the Post. This may leave a slightly rough edge so it's a good idea to sand it smooth. Use a fairly-coarse grit sandpaper, such as 60 or 80 grit.



5

Prepare the Form for Casting

With a smooth, flat, non-porous material like acrylic or PVC sign board, center the funnel as shown. Hot-glue the seam between the funnel and base—making sure to get glue all the way around the funnel edge—to prevent the concrete from leaking out. Place the Post in the funnel and mark the height on the post. Apply painter's tape to the Post above that mark for about 4-5" to protect it from the concrete.



6

Cast the Base

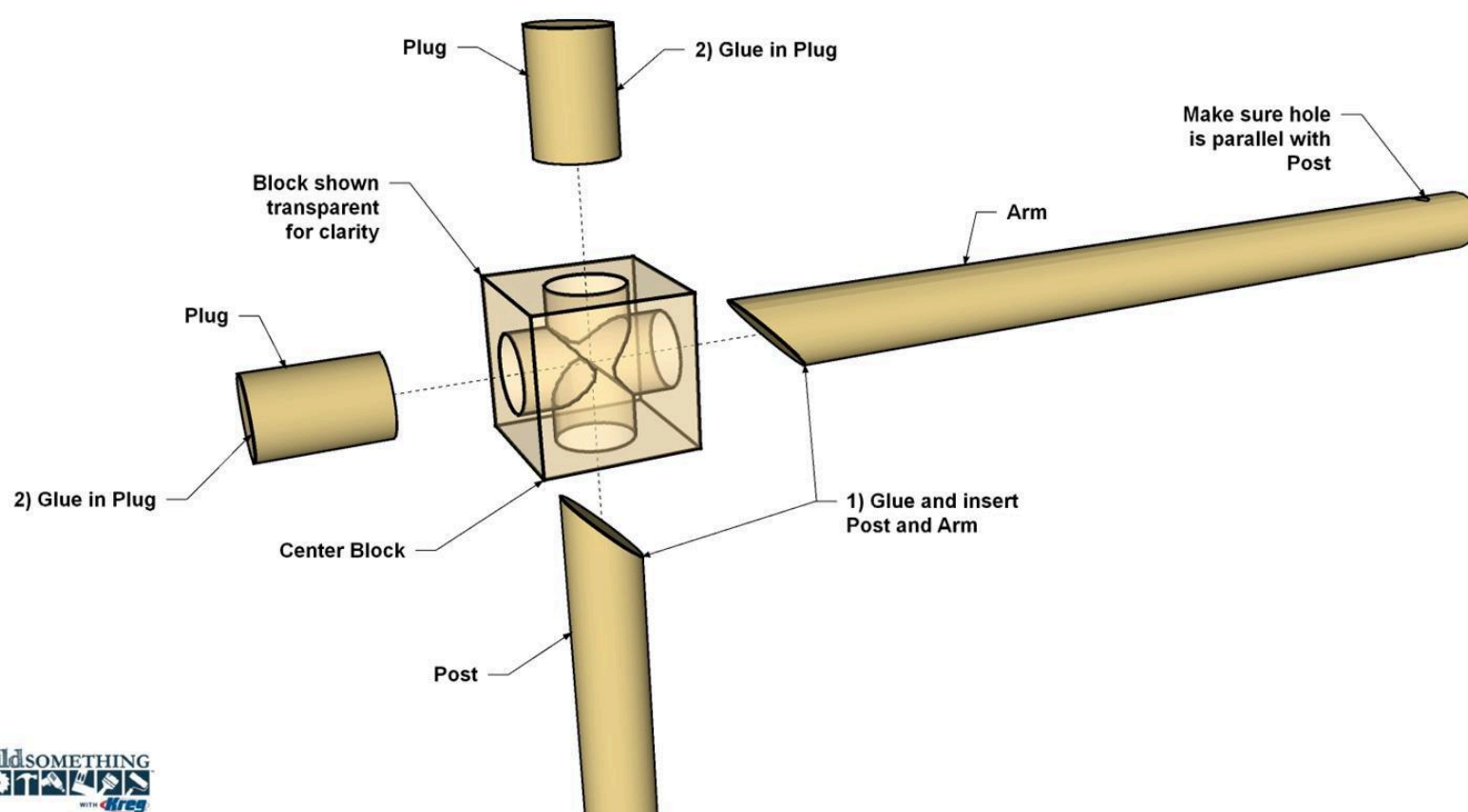
A concrete countertop mix will provide the smoothest finish for a casting like this. Make sure to mix up more than enough for the project, it's better to have more than not enough when you're casting. Mix the concrete thoroughly to the consistency of a thin milkshake. This will help the concrete flow evenly in the form.

Fill the form $\frac{3}{4}$ full and then insert the Post. Work the Post around to help work out any bubbles in the concrete and distribute it through the form. Push the Post to the bottom of the form and center it on the hole. Adjust the Post so it is perpendicular to the base. When the position is set, add more concrete to fill the form. Level and smooth it. Allow the concrete to cure according the manufacturer's recommendations.

7

Assemble the Lamp

Once the concrete has cured, carefully separate the funnel from the base, and then carefully release the base, with the Post still imbedded, from the funnel. Remove the tape from the Post. Then sand it, and the other wood parts, smooth. Apply glue to the mitered end of the Post, and then spread a little bit of glue inside the corresponding hole in the Block. Also apply glue to the mitered end of the Arm, and inside that hole. Press the Block onto the Post, and then insert the Arm into the Block until the mitered ends meet. Then spread glue in the other two holes and insert the Plugs. Use tape or clamps to hold the pieces in place while the glue dries.



8

Apply the Finish and Felt

Once glue has dried, clean any glue residue, sand further if needed, and wipe away dust. Mask off the base to protect it from any finish drips or runs, and then apply a finish of your choice. We used a natural oil. One final step is to apply felt fabric to the bottom of the concrete base, so it won't scratch any surface the lamp rests on.

9

Wire the Lamp

To wire the lamp, we used products from a company called Color Cord. You'll find links on the "Materials" tab. You can also find lamp parts in hardware stores and home centers. The cord simply wraps around the lamp, and then goes through the hole in the arm. The socket hangs from the cord. You can find information about wiring by following the links in the "Extras" tab.