



Building a Grow Light Frame

Resource Sheet

Materials

All PVC pipes should be 1" in diameter (this will make your grow-light frame sturdy and safe)

- 3 – 10' long PVC pipe
- 8 – PVC Tees (all soc, not threaded)
- 6 – PVC 90° elbows (all soc, not threaded)
- 2 – PVC 45° elbows (all soc, not threaded)
- Lighting
- Hacksaw or PVC cutter
- Pliers
- PVC Glue-Optional (e.g. Christie's Red Hot Blue Glue)

*All of these materials are available at your local hardware store, depending on the lighting (Mile Hydro/Way to Grow)

Instructions

1. Cut the pipe

- a. Cut 4 pieces of the 10' PVC pipes into 24" sections.
- b. With the remaining PVC piping, cut two 26" pieces, two 22" pieces, two 19.5" pieces, two 7.5" pieces and two 2" pieces.
- c. At this point you should have:
 - i. Four 24" pieces
 - ii. Two 19.5" pieces
 - iii. Two 26" pieces
 - iv. Two 22" pieces
 - v. Two 7.5" pieces
 - vi. Eight 2" pieces

2. Assemble the sides

Note about assembly: If using glue, it sets extremely quickly (15 seconds), so you do not have much time to adjust angles after the glue is put on. We recommend doing a "dry-fit" without the glue first to make sure everything fits together correctly.

- a. Connect a 90° elbow to each end of a 19.5" pipe piece.
- b. Connect a Tee into each of the 2 elbows (with a 2" connector piece), you can adjust the angle later.
- c. Connect a 22" piece into one of the tees (front side). Connect a 26" piece into the other tee (back side). Connect a tee on top of each of the 22" and 26" pieces



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- d. Connect a 45° elbow into the tee on the 22" piece (with a 2" connector piece) and a 90 degree elbow (with a 2" connector piece) into the tee on the 26" piece. Connect those elbows with a 7.5" piece of piping.
3. Glue pieces together (Optional)
 - a. Assemble the other side the same way as the first. After a "dry-fit," glue the side-pieces together to form two sides. This will help the grow-lab frame be easily assembled and disassembled.
4. Final assembly
 - a. Connect two 24" pieces into each of the bottom tees, to create the base. b. Connect the other two 24" pieces into the top tees. These are to hang the lights on.
5. Hang the lights
 - a. Loop the chain around a top 24" pipe. Close the loop by using your pliers to open up a loop on the chain and connecting it to another link on the chain. Attach an S hook to the end of each of the chains and attach these to the lights. Make sure to crimp the S hook closed around the chain to make sure it will not come off.
 - b. Do this with all 4 chains. Loop two chains on the front bar and 2 chains on the back bar.
 - c. You can adjust the height of the lights by hooking the S hook on the light higher up on the chain.

Estimated Costs

10' PVC pipes (x3)	\$12
PVC Tees (x8)	\$14
PVC 90° Elbows (x6)	\$8
PVC 45° angles (x2)	\$2
Light Fixture (x2)	\$60
Chains (x4)	\$3
S-Hooks (x4)	\$1
Total	\$100