

MAD GLEAM ILLUMINATION

a free resource for lantern makers and fans www.madgleam.com



How To Build A Reed Lantern Frame

Bamboo is great stuff if you want to make lightweight, portable lanterns, or any kind of lightweight structure that will be carried. It's strong, cheap, a renewable resource, and easily available. Hardware stores, gardening stores, Asian import stores, and even dollar stores will often have some kind of bamboo sticks for sale.

Since bamboo is quite rigid, if you want to make curving shapes, it may be easier to use reed to make the curved parts. Look for a source of basketry supplies to find reed.

Reed is the core of the rattan vine. it comes in long pieces and is somewhat flexible. To get the most flexibility out of it, you need to soak it in water. Put a few inches of water in your bathtub and throw it in. If you're doing smaller pieces, a deep tray will do. It doesn't need to soak too long. Depending on the thickness, ten to twenty minutes will do nicely. Pieces thicker than a quarter of an inch or so will take longer. You may want to leave those for a few hours or even overnight. It won't hurt them. To test the flexibility, pick up a piece and gently bend it. If it bends easily it's good to use. If it starts to crack, it needs to soak longer. It's good to prepare the pieces a few days before you assemble everything, since they need to be bone dry for the glue to stick properly.

To make a curve, take the wet piece of reed and bend it with your hands into a curve, somewhat more of a curve than you actually want, since it will spring back a little once you have untied it. Tie it with string, or use plastic-coated twist ties to fasten it together. Plastic twist ties are very useful and can be purchased on a spool in hardware stores and garden supply centres. The spool is best since you can then cut pieces to a useful length, 6-8 inches or so, usually much longer than the ties that come with garbage bags, though you can use those in a pinch - twist a few together for more length. Plastic-covered ties are better than paper-covered, which will disintegrate once they get damp.

To join pieces together to make circles or to make any kind of joint, use hot glue or five-minute epoxy glue. You can shave down the reed so it has more flat area to glue, but it is not necessary. Move fast if you are using hot glue - it cools and hardens very quickly. It also tends to glob and you may want a stir stick, bamboo skewer or small screwdriver to push the glue into small areas quickly.

Five-minute epoxy comes in two components that will need to be mixed thoroughly and used within five minutes, so don't mix too much at one time (maybe a teaspoonful at a time) unless you know you'll use it that fast! Wrap the joins with masking tape or fibre tape for more strength to hold them in place. Once the glue is solid, you can make stronger joins using thin wire to wrap - the tape can be left if it will not be visible once you paper the frame.

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What you need:

- Bamboo and/or basket reed. Reed may be used for curved or straight frame pieces, but bamboo works best for straight pieces where you need greater rigidity and strength.
- Hot glue gun and hot glue sticks **OR** five-minute epoxy glue.
- Disposable stir sticks to mix and apply epoxy or push hot glue into gaps.
- Plastic twist ties. If you get a roll of these from a garden centre, you can make ties of any needed length.
- Masking tape.
- A pile of old paper, scrap paper , tinfoil or an old phone book to use for disposable mixing surfaces.
- Thin wire uncoated craft wire from the dollar store is fine. **CAUTION: When working with thin** wire, do not pull hard on it with your bare fingers! You are likely to cut your hand.
- Wire snips to cut the wire.

What to do:

- 1. Cut your pieces almost to size , but a few inches larger than you want the finished piece to be. You'll trim things down later.
- 2. Using pieces of plastic twist tie, temporarily fasten the pieces into the shape that you want. If you need to support the frame on something stable, you can use twist ties to fasten it to something solid a brick, a paper towel holder or even a stepladder for large pieces. If you want to make hoops, it will be easier to make those first. If they need to be the same size, make sure you check them against each other to keep them consistent. If your frame include hoops or curves, attach frame pieces to the inside of the curves to make it easier to paper the outside.
- 3. If you are using hot glue, load the hot glue gun and set it on an old pie tin or plate to protect your table. If you are using five-minute epoxy, read the directions on the package, squeeze out a small amount of the two glue ingredients and then mix the glue thoroughly on a piece of scrap cardboard, or a paper plate.
- 4. Working quickly, apply your adhesive of choice to the joints in the frame that you want to stick. Use a slim stir stick or toothpick to push glue into the gaps between the frame pieces. Try not to stick the twist tie to the frame pieces.
- 5. Once the glue has been applied, wrap masking tape around the joint to keep it together until the glue hardens. You can peel it off later or leave it on if it's not too bulky and if it will be concealed by the papering.

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- 6. If the lanterns are temporary, you may not need further wrapping for the joints, but to make them sturdier, wrapping the areas that have been glued with thin wire will add strength without adding bulk. That way you will have fewer bumps to paper over.
- 7. Twist the ends of the wire together at the end of each join and bend them back to lie flat along the frame. Trim the ends of the wire neatly.
- 8. Once you have the main shape of the frame assembled, attach the secondary pieces to support large areas of paper, curves or protruding parts. Consider the overall design of the frame remember you will see the lines the supports make once the light is shining through, so try to consciously include them in your design. If you are including a wire support for lights, attach it to the frame, winding neatly to avoid bulky joins.
- 9. Once you have the frame assembled, inspect it for lumps of glue or protruding bits of wire. If the bump is on the inside of the frame, unless you are a very determined and meticulous craftsperson, it may be best to leave it alone to avoid possibly damaging the reed. Hot glue can be shaved down with a sharp blade. Epoxy is not easy to deal with once it's hardened, but you need less to stick joints so you may not have as many lumps and drips.
- 10. Paper your frame. (See Madgleam Illumination Tutorial 3, Papering Your Frame)

A few words of caution

Hot glue is HOT, and will stick to skin and clothes, possibly causing burns or damage. Be careful!

Five-minute epoxy is effective but smells quite strong. If you have chemical sensitivities or just dislike strong smells, proceed with caution. It stops smelling once it cures, so it does not last long.

Make sure you design and build your lantern with the lighting in mind. Always allow enough space to keep the paper cool. Paper lanterns can be flammable if improperly designed or lit.

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