Eryndor Presents: Javelin Design 351 - Quick, Cheap, Durable

Design Key:

- 3/4" (outer diameter) Schedule 40 PVC
- Blue Camping Foam
- 1/2" EVALite
- 2" High Density Open Cell
- Yellow Fabric Cover
- Duct Tape

Products Used in the Tutorial:

1. High Density Open Cell
2. 1/2" thick EVALite
3. Duct tape
4. Hockey Tape
5. DAP Contact Cement
6. 3/4" Schedule 40 PVC
7. Yellow Fabric
8. Blue Camping Foam

Product Notes:

The mindset for this design is to build an extremely well-padded spear. The result will be a hefty (20 -22 ounces), large-headed javelin that looks ugly but flies very well and has exceptional durability.

It is very important that the open cell used in this design is high density, as poor quality open cell will result in a failed javelin.

If desired, a thin-walled, larger diameter PVC core can be used as a substitute for the recommended core.

Tutorial Notes:

The left image is the side view of the Javelin, while the right image is the front view of the Javelin (as though its about to hit you in the eye).

Approx. Cost of Weapon:

$4.50 - 6.00

Approx. Time to Complete Weapon:

90 minutes for one javelin

Difficulty:

7

for a generaly simple design that has one finishing sep that is exceedingly difficult and requires a developed foamsmithing "touch" to execute properly

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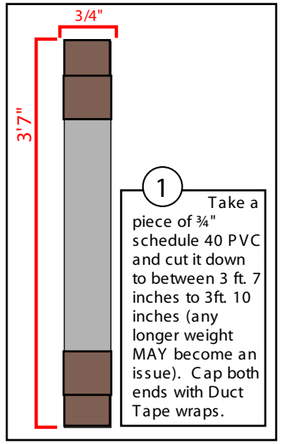
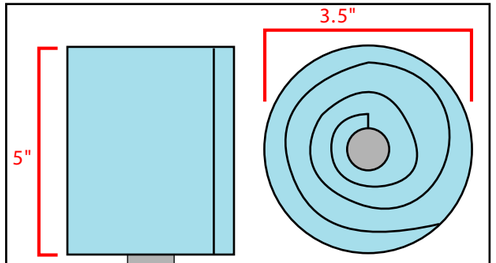
This weapon is designed to meet the safety specifications per RWC XXI.

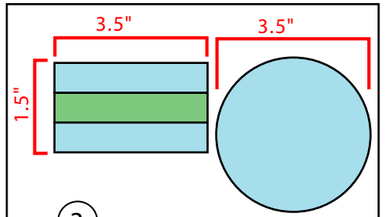
Making the Head: Steps 1-7



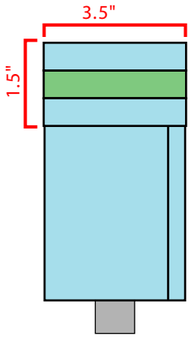
1. Take a piece of ¾" schedule 40 PVC and cut it down to between 3 ft. 7 inches to 3ft. 10 inches (any longer weight MAY become an issue). Cap both ends with Duct Tape wraps.



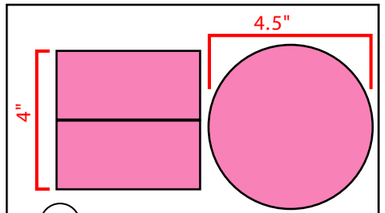
2. Take a 5" x 20" strip of blue camping foam. Dap both sides of the foam, then spiral wrap itself flush against one end of the PVC. This is how you build up the base of the striking surface. The finished surface area of the cylindrical wrap should be about 3.5" inches in diameter.



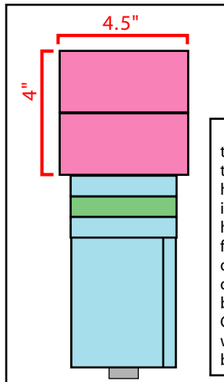
3. Cut TWO 3.5" circles of blue foam and ONE 3.5" circle of Evalite (they can also be cut into an Octagon shape if making a circle is too tricky). DAP the pieces together so that the Evalite is sandwiched in the middle.



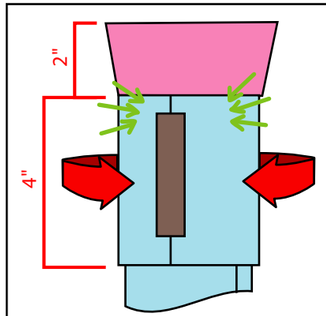
4. DAP the foam sandwich from Step 3 onto the foam base you built in Step 2.



5. Cut TWO 2" thick pieces of high density open cell foam (computer packing foam or Unifoam, for example) into 4.5" circles (or octagons). DAP the two open cell pieces together (use Spray Adhesive if you have it available, its superior to DAP for this application).

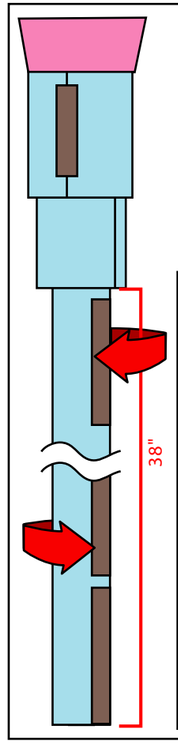


6. Center the open cell to the top of the javelin head and DAP it into place. If you have open cell foams of different densities, the more dense foam should be adhered CLOSER to the weapon core (the bottom).

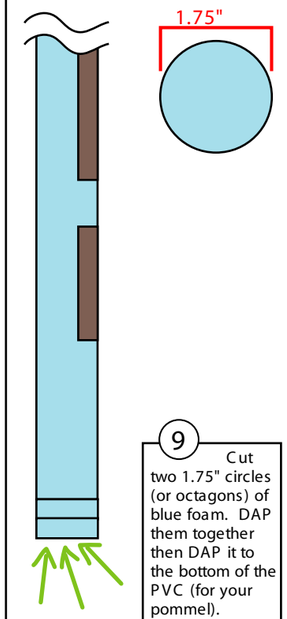


7. This is the most complicated step, read carefully. Right now, your javelin head is safe, but much too wobbly. To fix this, you will create a support wrap around the head. Take a 4" x 13.5" piece of blue foam and DAP it 2 inches onto the open cell and 2 inches on the closed cell foam. The key is to "wrench" (see Green arrows) the foam support wrap tightly around the head to compress the open cell it covers, do not be afraid to pull pretty hard. The "seams" of the blue foam support wrap will meet, so be sure to DAP the edges as well. Make sure the DAP is set well, and then use duct tape to cover the seam of the support wrap, it will want to peel away otherwise.

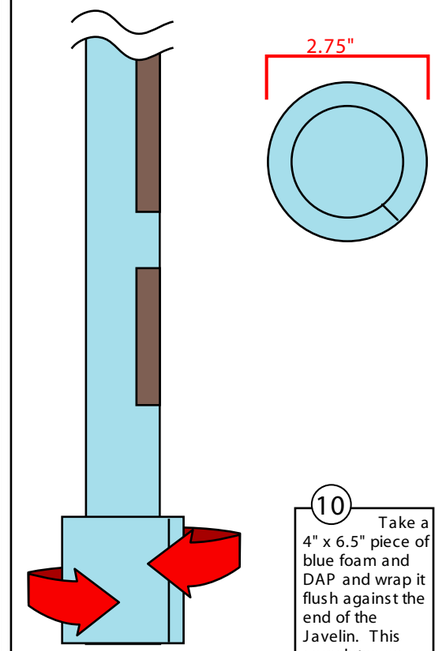
Making the Shaft & Pommel: Steps 8-10



8. Cut a piece of 4.5" x 38" blue foam(the length of remaining exposed core). DAP and wrap it all the way down the shaft... be sure to let the blue foam overlap itself a little bit. While it doesn't look quite as sexy as a perfect cylinder, the foam is less likely to separate and create permanent gaps in the shaft (another common reason for Javelin Failure). As soon as you DAP the wrap together, duct tape the seam together as well... it will help keep the foam in place as the DAP sets all the way. Alternatively, you can use pipe insulation to cover the haft, if you wish.

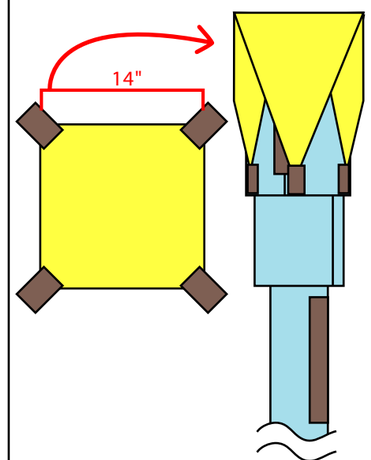


9. Cut two 1.75" circles (or octagons) of blue foam. DAP them together then DAP it to the bottom of the PVC (for your pommel).

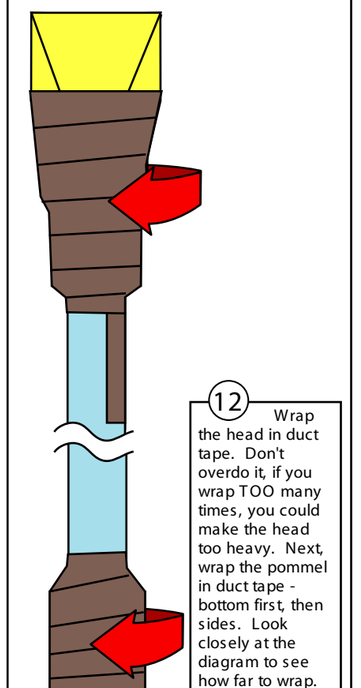


10. Take a 4" x 6.5" piece of blue foam and DAP and wrap it flush against the end of the Javelin. This completes your pommel.

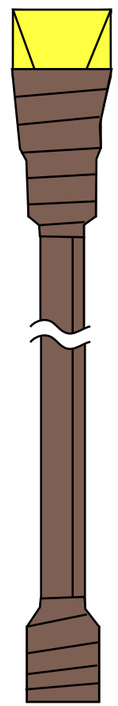
Finishing Touches: Steps 11-13



11. Take a 14" square of yellow fabric. Put a small square of duct tape on all four corners. Center the yellow foam over the top of the Javelin head, and then pull the four corners down onto the head and use the small pieces of duct tape to help hold it in place.



12. Wrap the head in duct tape. Don't overdo it, if you wrap TOO many times, you could make the head too heavy. Next, wrap the pommel in duct tape - bottom first, then sides. Look closely at the diagram to see how far to wrap.



13. Four long lengths of duct tape will entirely cover the shaft longwise. This seems to work better than "spiral wrapping" duct tape around the shaft. Put your chapter symbol on the head of the Javelin (or if you don't have a good symbol, the Everledden LifeTree works quite nicely)