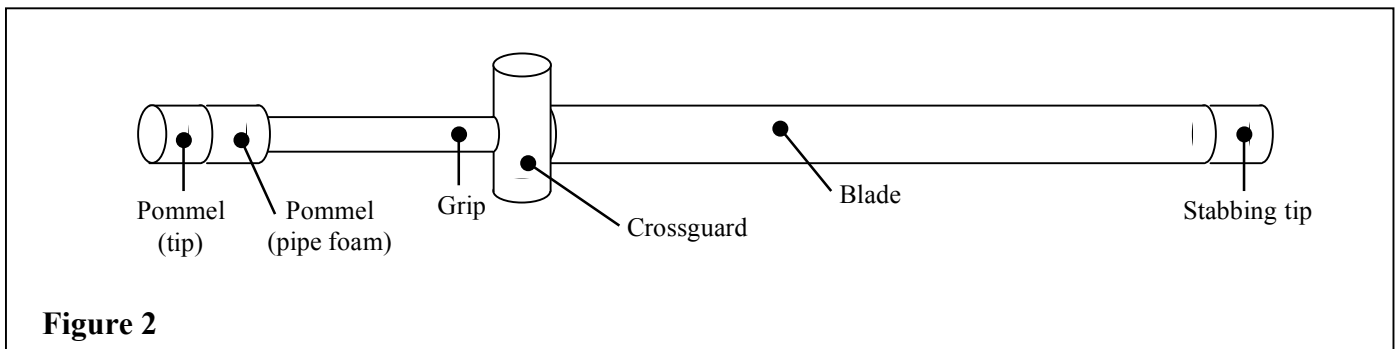
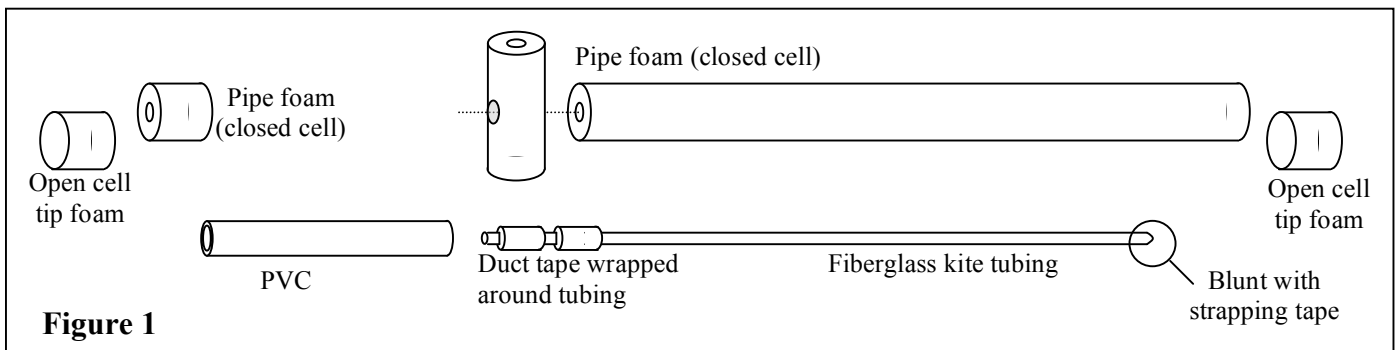


# How to build a boffer weapon



First, consider the grip. For a strictly one-handed weapon, the grip should be a length of PVC that extends about an inch or two past the bottom of your hand while the top is flush with the top of your hand. For an optionally two-handed sword, grip the PVC with one hand directly above the other; the lower end of the PVC should extend an inch or two from the bottom of the lower hand.

Decide on blade length. For a one-handed sword, anywhere from 16 to 36 inches should be sufficient; choose a length that you can handle easily in one hand. Subtract about four inches from the chosen length and add the length of the PVC grip. This is the length of the fiberglass core.

Once you have both grip and core cut to the desired lengths, blunt one end of the core with strapping tape. Start wrapping duct tape around the other end of the core. Build up a layer thick enough so that the core fits snugly into the grip. You should have at least two of these wrappings; see above diagram.

Fit the core into the grip so that the bottom end of the core is about an inch from the bottom end of the grip. Secure the core using strapping tape at the top of the grip.

Design a crossguard if you desire, and secure it to the grip/core assembly. A simple but effective crossguard is shown in the diagram above.

Fit pipe foam over the core. It should extend two to three inches past the core, and should be secured to the crossguard and grip. Make a similar arrangement for the pommel; use about one to two inches of the hilt to secure the pipe foam, and let the foam extend an inch past the end of the grip. You may have to widen the hole in the foam to accommodate the PVC's larger diameter. Also secure it to the grip with strapping tape.

Make tips by cutting out a cylinder (the same diameter as the pipe foam) from the open cell foam; secure this foam to the pipe foam using a single layer of duct tape wrapped around the outside.

Once you have both tips secured, wrap your weapon in duct tape. When covering the blade, tape lengthwise; *do not wrap*. This will compress the foam and make it hurt more on contact. Poke holes in the tips at both ends using a thumbtack; this allows the air to escape easily when the tip is compressed.

Voila! You should now have a durable and safe boffer weapon.

## Construction Notes:

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Strapping tape is structural in one direction (i.e. cannot be torn, stretched, et cetera). Use it to secure key components, but don't overdo it.

Duct tape is wonderful—it comes in many colors and is pretty durable. However, it is not structural; sufficient force will tear it.

Pipe foam is closed cell; that is, it does not compress easily.

Open cell foam is as its name describes; it compresses when force is applied

## Materials information:

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Updating... email ([danyuan@mit.edu](mailto:danyuan@mit.edu)) in the meantime

Fiberglass tubing may be obtained at Goodwinds Kites. Look under tubular fiberglass for 0.505 and 0.602 cores. 0.602 is generally used for large two-handed weapons. Foam may also be obtained from a number of different suppliers.