Jason's Guide to Simple Weapons
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Well, I promised you guys a guide to making weapons so you can busy yourselves over break. So below you will find all of the information you need to purchase the correct supplies and put your weapons together.

There is a lot of variation in weapon construction in the Realms. Some foam-smiths have very specific materials and techniques that they will not deviate from. Many focus on making the lightest weapon possible, while others focus on the aesthetics or the durability of the weapons they make. Some go completely by-the-book, while others cut corners wherever they can.

I will make the disclaimer now that my weapon making abilities are firmly in the 'average' range. What I am going to impart to you are the basic skills involved in making common weapons. I have no advanced techniques to share. However, once you understand these basic skills the doors will be open to you to perfect this art yourself. You will have the knowledge to discuss weapon creation with more advanced foam-smiths, and the tools to try your own experiments, to try to advance the tecniques even further. When I specify something is a rule, it means that it is a method or supply you are not allowed to change. All other aspects of the construction can be changed and improved upon in some way, and have been over the years.

This guide will begin with the step-by-step instructions to make a simple single-short. Afterwards, I will discuss the specifics of other weapon lengths and weapon types, but the techniques for putting them all together are the same as in this first example.

It begins with a piece of pipe. What we use is SDR-13.5 light-wall PVC pipe, and while not a hard-and-fast rule, is the best stuff you will come across easily. This pipe is used in irrigation, and as such, is not available at every hardware store you are going to go into. The one place in CT that always has it in stock are Lowe's Home Improvement stores. These are most commonly sold in 10' lengths, and the sizes you are interested in will be ½", ¾", and 1". These measurements do not actually correspond to anything specific on this light-wall pipe. They are the size that the interior diameter would be if the pipe was of a regular wall thickness. The actual outside diameter of a ½" piece of light-wall pipe is ¾".

To make a single short you need a piece of ½" pipe. A standard single short is 3'8" in length (the maximum allowed in the rules) and it just so happens that you can get exactly 3 of them out of a 10' length of PVC. Allowing for 2" for the foam plug, and 2" for the squishy tip, you need a piece of pipe that is 3'4" long. Cut one of these out of your pipe, using a small coping saw, hacksaw, or pipe-cutter, and you are ready for the next step.

The next thing you want to do is get some strapping tape. This is a special kind of tape that has fibers of plastic running down the length of the tape and is thus very strong. It is used for making and sealing boxes, and can be easily found at office supply stores like Staples and OfficeMax. You want to take a length of strapping tape and run it down the entire length of the pipe. This is a simple precaution that assures that if the pipe ever snaps or shatters (and believe me, I have seen it happen) that the whole thing won't fly apart and cause an injury.

The next step is to cap the ends of the pipe, and this is a rule. This is important because, even with foam on top, an open pipe edge will eventually work its way through and could potentially really hurt someone on the other end of your sword. We cap both ends because that same injury might occur to your hand. On ½" pipe it is common to use pennies to cap the ends since they are the perfect size and otherwise pretty useless. For larger pipe sizes, you can cut the caps out of a rigid plastic like the caps of milk cartons. Tape these caps on using a couple pieces of strapping tape in an X pattern.

Now you are going to put a plug on the end of your weapon, and as such, we get to our next kind of material, pipe foam. The rule about pipe foam is that it needs to have a wall thickness of 5/8". Most of the foam that you will encounter in the stores will be of ½" thickness or less, since that is all that is really necessary to insulate pipe. You may need to special order your foam, and I will provide you with a website for that purpose when I discuss purchasing at the end of this document.

To make a plug you need to cut 2" off of the end of a piece of foam. Now that is more foam then you need, so make a lateral cut and divide it into thirds. Now you can roll up the small piece of foam you have left to make a small cylinder, and secure its shape with a couple pieces of tape as shown.

This plug needs to go onto the end of your weapon. Use strapping tape to put it on the end as shown. It is important to make sure that the tape involved in these steps is firmly attached; otherwise it may come off while you are putting the foam on and make the weapon creation much more difficult.

Now you need to decide what you want to do with the blade. The rule is that at least ½" of the total length of the weapon be covered in foam. For your 3'8" single short, therefore, 22" must be foam. Since 2" of that is going to be squishy-foam on the end, that means you need, at least, a length of 20" of pipe foam. Cut your pipe foam to that or your desired length. Then, place a piece of strapping tape along the lateral slot in the pipe foam. This will keep it in once piece as you place it on the pipe.

Now comes the hard part. Sliding the foam onto the pipe can take a lot of muscle power. You will find it easier if you twist it a little as you put it on. Another tip is to use a small amount of dish soap, rubbed along the pipe, as a lubricant. Continue to slide the foam on until the end of the foam is flush with the foam-plug you attached earlier. Afterwards you have to secure the foam in two ways. First, place an X on strapping tape across the tip of the weapon. This will keep the end of the foam flush with the plug as you use the weapon. Second, place a couple pieces of tape laterally at the base of the blade, and then a ring of tape around the pipe there. This will secure the blade to the pipe.

Alright, we're almost done. Next you need to put on your squishy tip. Squishy tips are not required on weapons shorter than 6'6" but the extra 2" they give allows you to make three 3'8" out of one piece of pipe, they are a great safety precaution, and they make your weapon lighter. The foam you are looking for is purchasable at most sewing and craft stores. It is used for foam seat cushions and may be labeled as such. It may also be called (poly)urethane foam or normal density foam. Make sure the pieces you buy are 2" thick.

Out of this foam, cut a cylinder that is the same diameter as the end of your weapon. Don't waste too much time making this perfectly round; just get it in the neighborhood. You want to attach this to the pipe foam using 2 or 3 lateral pieces of tape. These simply need to hold the foam in place until you can get the duct tape on there, so don't go nuts.

Alright, now you are ready for the duct tape. The key is to use long, lateral pieces of tape that go up and down the blade. A standard single short or hand-and-a-half will use four of these. The piece should be longer than the top and bottom of the blade by about 1", so it can be folded over. Cut a lateral notch in these overlaps, and fold them over, such that they make a 90 degree angle over the edge of the foam and stick to one another. On the bottom of the blade, these should reach onto the pipe itself and stick to it. On the top, they should fold over to cover about a quarter of the squishy-foam tip. Be very careful that you use a light touch when covering over the squishy foam. If you compress the foam when you fold over the tape then the tip will be useless.

You are just about done. Next, you have to perforate the duct tape that is over the squishy foam tip. Take a dart, or a tack, or anything narrow and sharp, and cover the tape with small holes. This is necessary to allow air to move in an out of the squishy-foam, thus allowing it to squish.

You now have a legal weapon. It is a common next step to cover the entire handle of the weapon with electrical tape. You can fold duct tape or electrical tape over the bottom tip of the pipe. Afterwards you can wrap the handle with electrical tape or grip (sports) tape, or a combination thereof. I personally avoid grip tape because it can cause some pretty serious blisters due to the way weapons are swung.

And now you have a complete single short. It's nothing fancy, but it will get the job done. This format of making single shorts is exactly what produced the practice weapons that were initially provided for you and the ones that you constructed for yourselves at our first workshop.

Now we will discuss some basic alterations to the normal single short which, of course, are applicable to other weapon lengths as well.

Quillions, or cross-guards, or hilts, are a common addition to a lot of weapons. There are a couple of techniques commonly used in making these. I will delineate them below.

Pipe-foam quillions are easy to make and quick. You simply need to take a length of pipe-foam and cut a set of holes in the center of it. It is common to take a piece of pipe that does not have a cap on it, and use it as a hole-saw to cut through the foam. Once you have done this, you can slide the quillions onto the pipe and secure it with strapping tape by taping it to the pipe in several angles. Now you should stuff the quillions with leftover foam, and specifically cap the ends with plugs much in the same way as on the tip of the weapon. Cover the whole object with duct tape and you've succeeded in making some very functional quillions. I would advise doing this step before you put electrical tape on the handle, and certainly using electrical tape to pretty it all up afterwards is a good idea.

Another modification that you can make to the pipe-foam quillions is to put an angle into them to make a “V” shape. This is accomplished by taking your original piece of pipe foam and cutting symmetrical wedges into the top. You can then fold the foam length together to make the “V” shape and slide it onto the pipe. Like above, strapping tape it into pipe at several angles, stuff and plug the ends of the foam, and duct tape it.

The other way to make quillions is to use high density foam to sculpt a more stylized type of cross-guard. This foam is the type that is often used to ship things like computers, the same type that a boogie-boards and “pool-noodles” are made out of. Sometimes styrofoam is used to make these things, and that is not what you are looking for. Make sure that the foam that you use is ½” (or more) thicker than the diameter of the pipe, otherwise it will eventually fall apart as there will not be enough foam to keep the two halves together. You can now cut whatever shape of quillion you like out of this foam, and use the same technique to slide it onto the pipe and tape it up. In general, boffer weapons don’t look a lot like real swords, but cross-guards like this add a very accurate stylistic element to a sword.

Another stylistic change added to swords is the basket hilt, such is found on rapiers. Basket hilts have the capacity to protect your wrist to some degree, but are otherwise just cosmetic. In order to make a basket hilt, you should purchase a “camp pad”. This is a very dense, rather flexible type of foam that is around ¾” thick. You can find these in the camping section of just about any retail store. Making the basket hilt itself is rather simple. You simply cut a shape out of the foam and place a pipe-sized hole at the top and bottom. It is wise to duct tape the inside of the hilt before you slide it onto the weapon, as doing so afterwards will be difficult. You can now slide one end, then the other, onto the pipe. Tape the top of the hilt to the pipe, then the bottom in such a way that the hilt is curved, and your hand can fit comfortably inside. Finally, you can cover the rest of the basket with duct tape and electrical-tape the rest of the handle for cosmetics.

Common additions to weapons, especially single shorts, are something called split-pipe handles. The application of this type of handle creates a more natural grip for many people, and it also serves the purpose of counter-weighting the weapon a bit. In order to make a split pipe handle, you must take a small length of (in this case) ½” pipe, and cut it in half laterally. You then attach each side of the split pipe around the part of the handle that you hold. Attach them firmly to themselves and the weapon’s pipe with strapping tape, and, finally, you can cover the whole device with electrical tape.

Speaking of counter-weighting weapons, many people accomplish this by wrapping the handle with some sort of material. String, twine, leather cord, tennis-racket grip, and even thin wire are used to put a dense wrapping around the bottom of a weapon, moving the center of balance lower. These are used alone or with a split-pipe handle to create some very nice grips.

Important in the Realms are different weapon types. Axes, maces, and hammers can all be used in various situations where monsters are immune to normal sword-blows. Any fighter worth his salt will have quick access to a non-sword weapon at a questing event.

Making axe blades and mace flanges is accomplished using the same squishy foam that you used to make your squishy foam tip. Axe blades are commonly made out of the same 2" wide foam, and mace flanges from the thinner 1" type. However either type can be made from either thickness.

For this alteration to weapon making we need to go back to the step just before you put duct tape on your weapon. In the case of axes and maces, which are used almost entirely in a slashing fashion, it is very common to omit the squishy-tip, and end the weapon at the pipe-foam plug. Sometimes squishy-tips are incorporated into the axe-blade design.

We'll begin with an axe. For simplicities sake we will be making it out of 2" squishy foam, and giving it a single blade. Making double-bladed axes is possible, but not common due to the extra weight. The first step is to design the blade and draw it out on the squishy foam. Axe blades can be any shape, really, but you will find the process of making them easier the less curves and angles that you use. In the pictured example you can see how I use an overhang from the axe-blade to fill in the spot where a squishy-foam tip would be, but you can also make a blade without this overhang and attach it just to the side of the weapon.

Strapping taping the axe-blade is a tricky process. It is very important not to compress the foam which would distort the shape considerably. It is best to use several long pieces of strapping tape that grab as much surface area of the foam as the can, and wrap around the back of the blade to hold it in place. Again, this is to keep the whole thing together while you duct tape it, so overuse of the strapping tape should be avoided.

The easiest way to duct tape the blade is with long parallel strips on either face. Extend the strips of tape about one inch longer than the ends of the blade, slit them and fold them over. The tape should overlap from the squishy-foam onto the pipe foam to help hold it securely. Finally, once the faces are taped, use long strips along the edge of the blade to cover over the folded tape ends, and give it a finished look. Of course, greatly perforating the blade on every surface is very important, so do that with your dart or knife. Once the blade is on, you can finish the weapon as described above.

An important tip for finishing up an axe (or mace) is to apply some heat to the blade when you are done. You see, when a blade compresses it is possible that the duct tape will momentarily detach itself from the squishy foam. In that circumstance, it is likely that the duct tape will fold over and stick to itself. This will leave a permanent crease in the blade which can be very severe. If you apply some heat to the blade, it will cure the glue on the inside of the tape, and though it will continue to separate from the squishy foam when compressed, it will lose its ability to stick together. A hair dryer is a simple and safe way to do this, though I have been known to hold a weapon quickly over the burner on an electric range. Too much heat will cause the duct tape to shrink and distort, so apply it gradually.

Maces are not vastly different from axes. Of course, a mace has flanges, most often three or four. You can think of these as miniature axe blades and make them in much the same way. It is a good idea to make these out of 1" squishy foam because it will be lighter and there is more room to place the flanges on the pipe-foam. All of the concepts involving cutting them out, strapping them to the weapon, and duct taping them are the same as I described for an axe. It is also looks best when you place the flanges at equilateral angles around the circumference of the pipe foam.

I should note here that hammers and maces are usually not considered different weapon types in the realms. They are both bludgeoning weapons and the use of one of the other is really just a personal preference. Very rarely I have seen NPCs that are only affected by hammers with the exclusion of maces, or vise versa.

Hammers can be made in the same manner as axes or maces, with something akin to a hammer head being cut out of the squishy foam. There is, however, a more common construction method for hammers, to create something commonly (and sarcastically) labeled as “cheatin’ sticks” due to their effectiveness in getting around shields and parries.

In this construction method you want to take a small length of pipe-foam, perhaps around 6 or 8 inches. In that foam, in the center, or towards the rear, you want to cut a hole that is large enough for the tip of your weapon to fit into, effectively creating a “T” shape when it is placed on the end. Strapping this cross-piece in place should be done from several angles. Use tape across the top and especially at the corners, where the head is likely to tear off if caught in a parry. This head should them be stuffed with foam, and specifically have plugs made that are flush with the ends and taped in place. Now, on the striking surface of the hammer head, construct a 1” or 2” squishy foam tip. Duct tape it all together as described above, and you have your hammer.

Now all of the above were described in reference to making single-shorts. The differences between these and hand-and-a-halves are few.

For hand-and-a-halves, use ¾” light-wall PVC, and, of course, the appropriate sized pipe foam. It is not uncommon to make hand-and-a-halves, especially 4’6” ones (for 1 path spell-casters) out of ½” pipe, but if you do this you should make the entire length of the handle split-pipe. Failure to do this will result in a weapon that can be too flexible and very easy to snap in half during combat.

Hand-and-halves for fighters are 5’ long. If you use a squishy-foam tip (which is not required, but advised), you should cut your pipe to a length of 4’8”. If you are not using a squishy tip, then cut it to 4’10”. Spell-casters need to use hand-and-a-halves that are 4’6” in length. For these cut your pipe to 4’2” for use with a squishy tip or 4’4” for construction without.

Pennies are now too small to use as the caps for the pipe ends. Cutting them out of rigid plastic is best, though some people have been known to use quarters as they are the right size.

All of the above techniques for quillions, hilts, handles, and other weapon types can be as easily applied to the hand-and-a-half as to the single short.

You now know the basics of making simple boffer weapons. I will conclude this guide with some links for buying the appropriate supplies over the internet.

Light-wall PVC Pipe: Most readily available at your local Lowe’s Home Improvement Center. You are looking for pipe labeled SDR-13.5 or PVC 1120. SDR-21 or SDR-26 are very similar and also acceptable. You can ask for pressure pipe or irrigation pipe.

1/2" Light-wall Pipe; 3/4" Light-wall Pipe

Pipe Foam: Pipe foam needs to have walls of 5/8” thickness. You want to buy the appropriate size for the pipe you are using. The measurements of foam for PVC pipe are the same as for copper, measured on the outside diameter (iron is measured on the inside diameter), so when you are looking at the package, go by the measurement for copper if PVC isn’t listed.

Pipe Foam Website

Squishy Foam: Also called open-celled foam, (poly)urethane foam, or regular-density foam, this is a common craft foam for making cushions for chairs. Available at most craft stores, especially Jo-Ann Fabrics, you shouldn't have to use the internet to get these. 2" is correct for squishy-tips, 1" or 2" is good for axes and maces.

2" Foam Pad; 1" Foam Pad

High Density Foam: This is the packaging foam that you can make sculpted quillions out of. It is also known as plank foam. The cheapest (free) place to get this stuff is out of packaging that you just get in the mail. You can also get it out of the right kind of boogie board or kick board and most 'pool noodles'. Since it is an industrial material it can be expensive to buy straight out. If you do buy a 'pool noodle' then look for the solid ones, without the hole in the middle.

Kickboard; Pool Noodles; Plank Foam

Camp Pad: This is the stuff you want to make basket hilts out of. Any store that has camping supplies should have these, including the readily available Wal*Mart. You may also find something similar organized as exercise mats.

Camp Pad

Duct Tape: Of course, duct tape is available at any Wal*Mart, Home Depot, Lowe's, or a multitude of other places in a few standard colors. Grey, Red, Green, Yellow, Brown, Black, and a few others are usually pretty easy to find. But if there is another very specific color you would here is a web site that specializes in a range of duct tape colors. Remember, blue is a restricted color for magic weapons only.

Identi-Tape's Duct Tape List

And that's all you need to know. Later on I will create another guide for making more advanced weapons, including arrows and shields. Watch for that in the coming weeks.

Good luck everyone, see you on the field.

Jason