

## SHOFAR FACTORY: WHAT YOU WILL NEED



Goat Horn Shofars	Ideally, use goat horns since their shape is easier to drill a mouthpiece into. Buy them clean from Chabad sources. Otherwise you must clean them yourself far in advance of your Shofar Factory program. (see page )	Yossi Gansbourg Sholom Raichik Levy Shemtov
Shofar Factory Sign	Make a nice colorful "SHOFAR FACTORY," sign to mount on the display. Use the Shofar Factory logo for a distinguishing mark.  If you are dealing with many groups coming to make shofars, it is useful to make a set of instructional posters to lead participants from station to station.	Sign store
Poster Display	Include posters of different horned animals, Rabbi(s) Blowing shofar, a professional shofar factory at work,	Tzivos Hashem
Display of Taxidermy Mounted Animal Heads with Horns	The ultimate in a dramatic display. Shoulder mounts of a Ram, Sheep, Deer, and Goat are basics. Other interesting options include Kudu, North American Pronghorn antelope, various African antelopes, Gazelles, etc.	Buy or rent from a Taxidermy Shop or borrow or rent from the local Museum of Natural History.
Folding Display	A backdrop made of 3 panels attached together by hinges to hang the animal mounts. They are sturdiest when stood in a wide open "C" shape. 4x8 Plywood method: 3 sheets of 5/8" or 3/4" thick plywood cut down to 7.5 feet by 3 feet 10 inches. Lightweight Method: Use large prefabricated interior doors. Mount hinges to attach together .	Build your own at Home Depot
Mounting Material	Use simulated grass patio cover (looks like Astroturf) to cover the display to give it an outdoors look.	Home Depot
Sample Shofars & Horns For Display Only	Horns not fit for making a shofar: Deer antlers, bull, cow, or ox. Gemsbok Plastic Shofar, Trumpet, didgeridoo Kosher Shofars: A flat shofars, a "Vov" Shofar, the Yemenite Kudu Shofar to recall the <i>brocho</i> of Tka B'Shofar Godol that will announce the coming of Moshiach. Also keep on hand a successfully drilled sampled like the shofars you will be making in case of mishap during the demonstration	Tzivos Hashem Judaica store Taxidermy Supply
Pre-cleaned ram's horn with cartilage reinserted	The cartilage must be cured and clean of any flesh or dirt. Get it this way from your shofar supplier - or prepare it yourself like this ( <i>it is messy</i> ). If it still has flesh on it - Put it into a (treif) pot of water and about a cup of baking soda. Boil it for 4-6 hours while completely submerged. If most of the meat is gone but it smells bad, put it into a solid container and cover with pure bleach - (clorox works very well) let it stand for a day and then let it dry.)	Tzivos Hashem
Tongs	For getting the wet shofar out of the bucket	Housewares
Channel locks -(pliers)	to pull the cartilage out of the shofar	Hardware
Baby Bottle brush	to scrub the inside of the shofars (You can also use a vegetable brush snipped on one side.)	Housewares or Pharmacy
5 gallon bucket:	You can use a BaTampte pickle bucket - but remove the markings)	Home Depot, Raskin's Fruit etc
Curved measuring rod	Take a white coat hanger, (it's easier to see if you drop it on the floor,) clip off the hook with a wire cutter and bend it into "C" shape. You will need one for the presentation and many more if the children will make shofars.	Dry cleaners
White-Out Pen	This is used to draw a white mark on the shofars(s) as you measure them. Make a line showing where to saw the tip off and a small dot where the hollow ends. This makes it easier to know how far to drill. Pentel brand lasts longest.	Office supply
Mini-Coping Saws	A safe hand-tool kids can use for sawing off the end of shofars. You will need one for the presentation. If children will be making shofars you will	Hardware or Tzivos Hashem

	need one saw for every two children. This is the part of the operation that the children get to invest the most work into, don't skip this step.	
Replacement blades	You will need replacement blades every 3-4 shofars. Six inch long replacement coping saw blades (rough-cut) should fit our mini-coping saws.	Hardware
Goggles	You will need one pair for the volunteer, (and one for yourself – unless you wear glasses already,) during the drilling portion of the presentation. Get at least another three if children will be waiting their turn to get their shofars drilled.	Hardware
Rubber Gloves	The kids who take out the cartilage will wear these. Medium or small size long cuff dishwashing gloves are best.	Housewares
Disinfectant/Deodorizer	To put into the water in the bucket (the presentation demonstrates the cleaning process, right?)	Housewares
Leather or fabric Working/Gardening Gloves	You will need two pairs for the part of the presentation where the volunteers cut off the tip of the shofars. You will need them again when you will call up a volunteer to hold the shofars while you drill.  If the children will be making their own shofars, the gloves will protect their hands and avoid scratches. Also, work gloves make the kids feel like real serious craftsmen. These should not be used for shellacking the shofars. Shellac will ruin them once dry.	Supermarket or Health Food store
Variable speed/reversible drills	Get two drills; one for the bit that makes the hole and one for the bit that makes the mouthpiece. Be sure to get the variable speed variety (so that you can drill slowly when starting the hole.) Also make sure the drill reverses in case the bit gets stuck in the shofar (It happens!).	Hardware
Drill bits	You will need high speed drill bits. An extended 6" bit is recommended instead of the standard 4-6 inch ones. This will enable you to leave most of the horn and make a shofar by "cutting it long". Use 5/32" for small and thin shofars and 3/16" for thick and heavy shofars. Get several in case it breaks. For longer shofars or 8" bits	Hardware
Step-bit (or Cone bit)	This drill bit essential for making a shofar that can be successfully blown. Once the shofars has been successfully drilled this bit is used to widen the hole on the outer mouthpiece while leaving the inner hole or sound canal intact. Note: DON'T try to accomplish this with a regular drill bit. You will risk damage and serious injury. The best one is double fluted and titanium coated for long life, made by Veribit.	Hardware, Tzivos Hashem
Sandpaper	If you will be making shofars with just a few dozen children at one or two presentations a year – it may not pay to invest in a belt sander and you may be able to manage having the kids smooth the mouthpiece with handheld sandpaper. But this will work if you are careful to choose only small shofars that can be made in a way that the mouthpiece stays narrow. Bulkier shofars need the aggressive sanding of a belt sander. You will need medium grit.	Hardware Store
Delta belt-disk sander combo or  Makita Belt Sander (#9031)	If you will be making a hundred shofars but you are not in any hurry the Delta belt sander is the tool for you. This belt sander has a 1 inch belt and an optional vacuum attachment and costs around \$100.  If you need to turn out dozens of shofars every hour you need the aggressiveness and durability of a Makita 9031 hand held belt sander (old model # 9030 is just as good). Besides its small size, it has a speed adjustment, a vacuum attachment (works not bad) and works very fast!	Tools On Sale  Tools On Sale
"C" clamp(s)	The Delta sander can be permanently mounted to a table with a few bolts. To mount it temporarily, place it on the corner of the table and use two 4" "C" clamps. For the Makita sander use a large 6" "C" clamp near the handle of the sander.	Tools On Sale
Extra sanding belts	Make sure you have spare sanding belts. Get the size recommended for your model sander.	Tools On Sale
Vacuum Cleaner	If you must use a sander, a vacuum is a MUST. Attach the hose to the	Home Depot or Tools

	vacuum adaptor of your sander. Get a QUIET but powerful model at 4 hp or more. The ShopVac QSP series are both and affordable. Note: Vacuum cleaners take up a lot of electricity. Plug them into a separate circuit than your drills and sander.	On Sale
Spare Vacuum Bags	Don't rely on the built in dust filter of any vacuum. Buy disposable vacuum bags for your model machine in advance.	Home Depot or Tools On Sale
Dust Collector	You can design and build your own vacuum hood to catch the dust from the sander using a clear plastic 1 gallon bottle, (like Ocean Spray). Cut away the bottom (and a little of the side) and you will have a perfect dust catcher to keep the area and the air clean.	Supermarket
Power Strip	Since you will be using two drills and probably a sander have a multi-outlet power strip. It is best to get one with a built-in resetting fuse to avoid power outages in the building. Note: Avoid plugging the vacuum together with the drills and sander.	Hardware or Housewares
Extension Cord	Bring electricity to where you set up not the other way around. If you are using a sander, use at least a 14 gauge cord no longer than 25 feet long.	Hardware or Housewares
Duct Tape	Keep electrical cables out of peoples way by taping them down with duct tape. You can also use it to attach the dust collector to the sander.	Hardware or Housewares
"Split" Hooves	To graphically show one of the signs that makes an animal kosher .	Taxidermy Shop or Museum of Natural Science Museum of Natural History.
Table Cloth	Cover the display table with a heavy cloth to catch all the sawdust and debris from sanding and drilling.	Fabric or upholstery shop
Leather covers	Suede rawhide to place at ends of the table for an exotic workshop look.	Tandy Leather Supplies
Serviettes	You can use alcohol soaked napkins (like you get on the airplane) to clean shofars in between kids who try to blow the shofars. Optionally you can use alcohol & cotton balls.	Housewares or Pharmacy
Tapered Reamer	This is a handy tool to smooth out the mouth piece of the shofars by hand.	Home Depot
Disposable Gloves	Optional to wear during shellacking. Get disposable latex gloves in boxes of 100.	Housewares, or Restaurant supply
Questionnaire	To sign up kids in Tzivos Hashem and for in-house "evaluation" of the program	Tzivos Hashem
Water Base Polyurethane	Since we don't have the time and are not able to bring machinery to polish the finished shofars to a glossy shine, you can give the shofars an artificial shine with a glossy polyurethane shellack. The advantage of the water based variety is that it does not give off flammable or dangerous fumes and cleans up with water while wet. You can also dilute it with water (50%-50%) and it will give a brilliant shine to the shofars and dry in about 10-20 minutes depending on air temperature. Suggested brands: Last 'n Last, Harco, Benjamin Moore. Note: the shofars is still kosher if painted with polyurethane.	Home Depot, Hardware
Medium Paint Brushes	Brush on the Polyurethane with 1.5 inch bristle brushes.	Hardware
Containers for Polyurethane	Three or four sturdy plastic containers are useful when a small crowd needs to brush polyurethane on their shofars.	Housewares
Drop cloth	A disposable plastic drop cloth will keep the polyurethane area from getting messy.	Hardware
Shofar Factory Stickers	As a prize to give to those who fill out and turn in the questionnaire	Tzivos Hashem
Instruction Diagrams For Shofar Blowing Shofar 10 – How and Why		Tzivos Hashem
Tzivos Hashem Newsletters		Tzivos Hashem
Moshiach Times	Edition	Tzivos Hashem
Tzivos Hashem sign-up forms		Tzivos Hashem
Rosh Hashona Holiday Brochures	For adults	Shlomo Lakein

Tishrei Competition	For children	Tzivos Hashem
Slide Show		Tzivos Hashem
Slide projector		
Slides		Tzivos Hashem
Band Aids	In the unlikely event of a mini coping saw scratch, have a few of these handy.	Pharmacy