

How to make a foot operated soap dispenser for Forest School



by Richard Irvine

An advanced Forest School activity for children to practise the skill of drilling.



"Returning to running training or Forest School sessions after lockdown requires a few adaptations to the informal, pre-covid way of doing things. Reading reams of conflicting government advice and writing new risk benefit assessments and operating procedures takes quite a lot of time and mental energy, so it was good to get hands on and invent the main thing that I was missing – a hands free soap dispenser. Soap on a rope might have been a safe and practical option but could quickly become unappealing and is counter intuitive for users. I had a training course due to start that had been postponed for 4 months and needed a solution.

This article shows the results with enough step-by-step photos for you to make your own if you want to. I made one for the camp and another by the loo. They sit alongside a standard Tippy Tap and have had a weekend of testing with a group of 9 adults and seemed to keep working well – how it would hold up to use by children remains to be seen!

Once you have gathered everything you need, this project should take no more than one hour from start to finish."

Tools you will need:

- bow saw
- knife
- twist drill with 7 or 8mm bit
- auger bit and brace – sized to fit the top of the soap bottle
- axe or froe
- mallet
- hammer



Materials:

- liquid soap in a pump bottle
- old bike inner tube
- paracord
- clout nails
- 5m endless ratchet strap
- length of roundwood, 10 – 15cm diameter (ash or chestnut are ideal)





1. Split your length of wood through the centre. This piece was axed flat years ago as part of a camp seat. It was close at hand so I grabbed it to use.



2. With the wood held securely in a sawhorse, saw a groove in the bark side about 5 or 6cm from the end. The groove should stop at least 2cm from the flat side of the wood.



3. Place the bottle on the wood as shown, to measure how tall the stand needs to be. Saw it off a few cms beyond the top of the pump handle when it is extended.



4. Place the wood upright on a stump and very carefully measure up where to cleave with your axe or froe. The aim is to remove the section of wood above the groove, leaving a backplate with an integrated shelf. It will look like a high backed chair.



5. Hopefully you now have something that looks like this.

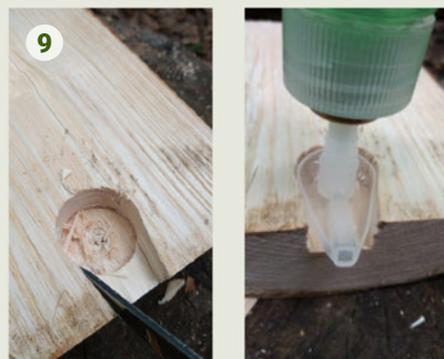


6. Time to use the offcut from cleaving to make the top block that will press on the pump handle. Saw a groove a few mm deep, all the way around the bark side. This should be about 1cm from the end of the wood. Pay attention to holding this short length of wood safely while you saw.

7. Use your knife to carve a V shaped channel down to the base of the saw cut made in step 6.



8. Turn the wood over and drill a large hole using the bit and brace. This hole should have a diameter as wide as that of the pump handle. It should be a couple of cms deep but not go all the way through the wood.



9. Use the knife to carve a tapered channel from the auger hole to the edge that will house the nozzle of the pump handle.



10. Turn the wood over and saw off the section that you have been working on. The gap from the back of the drilled hole to the back edge of the wood should be small enough to not touch the back piece of the stand when the device is assembled.

(continued overleaf)



11. Cut a length of the bicycle inner tube long enough to wrap around the backplate with some overlap. Wrap the tube around in a position where it will hold the soap bottle firmly against the backplate. Attach it with a clout nail or two. Check the length so that they don't go through the backplate and puncture the soap bottle!



12. Choose a tree or post to attach the soap dispenser to. Place it at a comfortable height for users to place their hands. Strap the backplate to the tree or post with an open ended ratchet strap (£4 each from Screwfix). If the dispenser is going to be in place for any length of time, use some

form of bark protector underneath the strap. Mine will be removed every couple of days so there shouldn't be any damage to the bark occurring.

13. Either split a plank from your leftover wood in step 1 or find a bit of scrap wood to make the foot pedal. Cut to length (30cms ish). Drill a large hole in one end and a smaller 8mm hole in the other end.



14. Cut a peg to hold the front of the pedal in place through the big hole.



15. Cut a length of paracord a bit longer than twice the height of the ground to the top of the pump block. Find the middle and place it in the groove at the top of the pump block.



16. Thread both ends of the paracord through the small hole in the pedal board and adjust the length so that they hold the end of the board up enough to give one squirt of soap when the pedal is depressed. Tie them in a double overhand knot under the hole. This can easily be adjusted and finely tuned to exert the right amount of pressure on the block. Make sure that this small hole is directly underneath the shelf that the soap sits on otherwise the top block will be pulled forward off the soap bottle. This stage takes a bit of testing and tweaking but hopefully will result in a functional woodland soap dispenser in the end.



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I enable staff and pupils to get the most from outdoor experiences. Through training adults, leading one-off sessions or running bespoke programmes, the genuine cross-curricular potential of learning outside the classroom can be unlocked. Promoting child-initiated learning is central to what I do, based on 20 years of teaching, management and training.

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Richard's books: [Forest Craft](#) and [Wild Days](#) are available in our shop

