

This activity contributes to the following badges:



Community Impact Staged Activity Badge



Cub Our World Challenge Award



Scout World Challenge Award



Chief Scout's Silver Award, Chief Scout's Gold Award



Queen's Scout Award, Chief Scout's Diamond Award, Chief Scout's Platinum Award

Explorer Scout Young Leaders

Your Young Leaders could lead this activity to work towards their mission 2.

Cubs | Scouts | Explorers | Network

Build a water pump

World Water Day, 22 March Use this mini model to spark discussion about access to clean water and sanitation around the world



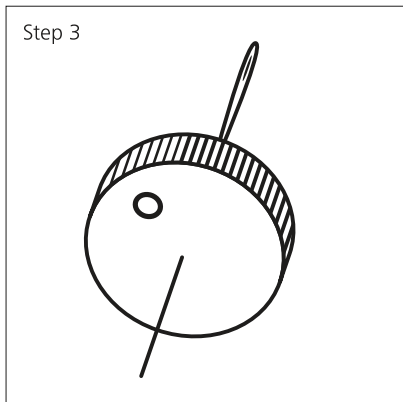
Time 30–40 minutes

Equipment

- a plastic bottle cap (that fits snugly inside the canister)
- drill
- safety goggles
- film canister
- cutters/sharp scissors
- nail
- hammer
- protective board
- bicycle spoke
- bicycle spoke nipple
- small piece of plastic, cut from a sauce bottle or similar
- 2p coin
- bucket of water

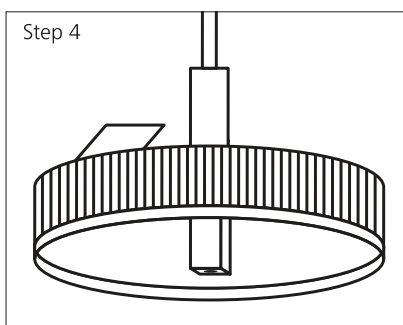
Instructions

1 Firstly, you need to make lots of holes. Take the bottle cap and drill a small hole (around the size of the end of a cotton bud) in the top, making sure it's off to one side – or you can help the young people do this, but make sure they're well supervised and that you've taken appropriate safety measures, eg everyone is wearing safety goggles and hands are out of the way.

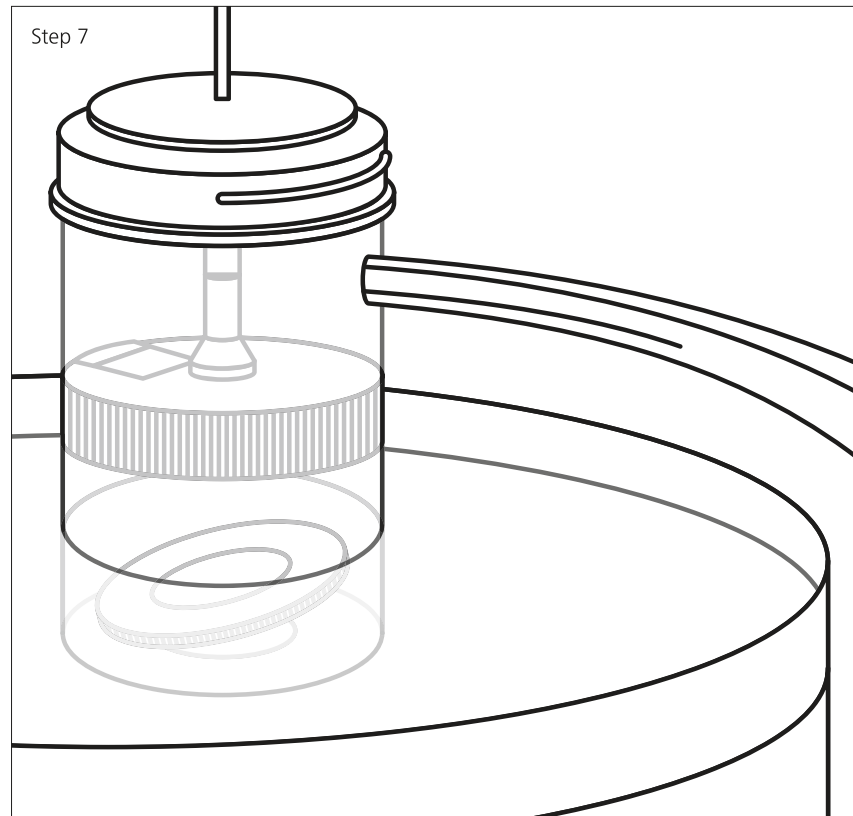


2 Next, drill a hole in the middle of the base of the film canister and carefully cut around it so you have a hole around the size of a 1p piece.

3 Ask your young people to make a small hole in the centre of the bottle cap and the film canister lid by taking a nail and carefully hammering it through the plastic. Make sure you have protected your work surface with a board first. These holes need to be wide enough to fit the bicycle spoke through snugly. Then they need to make another, larger hole for the water outlet in one side of the canister, up near the top edge. They can do this by working the nail the whole way through the hole and wiggling it around a bit, or by using a thicker nail.



4 Get a young person to insert the thread end of the bicycle spoke into the central hole in the bottle cap and fix it in place on either side using a bicycle spoke nipple.



5 Ask a young person to cut the piece of plastic into a small tab that is big enough to cover the larger hole on the bottle cap, as well as allow for excess that can be glued to the lid. They're using this plastic to create a flap (or valve) that will open and close.

6 Get them to place the 2p coin into the base of the canister – this will act as a suction valve. Next, they should position the bottle cap, complete with its bike spoke and plastic flap, into the top of the film canister, before wedging the canister lid onto the spoke. The lid should be the height of the canister away from the bottle cap so that it doesn't impede the bottle-cap pump reaching the bottom of the canister.

7 Now when they place the base of the canister into water and pump the spoke up and down, water will shoot out of the side outlet. The more

holes, ie outlets, the young people add to the canister, the more jets of water there will be!

8 Discuss the importance of access to clean water and sanitation with your section and how pumps are changing the lives of people living in the developing world. Why is access to clean water and sanitation so important and what more can be done to improve the situation?

Take it further

This activity could be a brilliant introduction to your larger-scale clean water and sanitation A Million Hands project. The discussions you have around the subject could provide great motivation for your Walk for Water in March. There are also helpful resources to support your project, created by our charity partner WaterAid, which are available to download online at amillionhands.org.uk.