

# Simple Inventions: Clean Water With Less

by Liz Huyck

Art by Dave Clark



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## A Cool Drink of Water

**Many people around the world get their water straight from rivers or wells. Sometimes that water is not very clean and makes them sick. Are there ways to get clean water without having to pay a lot for it?**



## Sand Soak

An earth-inspired way to purify water is to let it soak through layers of sand and gravel in a big jar, or even through a bare clay pot. As water seeps through the small spaces, dirt and germs get trapped and eaten by friendly bacteria. A layer of charcoal can soak up other pollutants.





## Cloth Clean

Cholera is a nasty illness caused by tiny parasites that live in water. One way to keep them out of your drink is to pour contaminated water through four layers of thin cotton or silk cloth (such as a sari). The fabric traps plankton in the water, which in turn trap the cholera.



## Sun Scrub

Another way to clean water is to lay clear bottles or bags full of water out in the sun. The heat and UV rays will kill off the germs in about a day.

## Super Sipper

The Life Straw is a water filter that cleans as you drink. Just plunge it into a filthy puddle and slurp. These straws are simple to use and last for many months. Inside is a filter with very small holes that only let water through, no bacteria. They do take a bit of fancy technology to make, but if you make a lot of them, they don't cost much.



Why not  
make it  
useful AND  
fun!





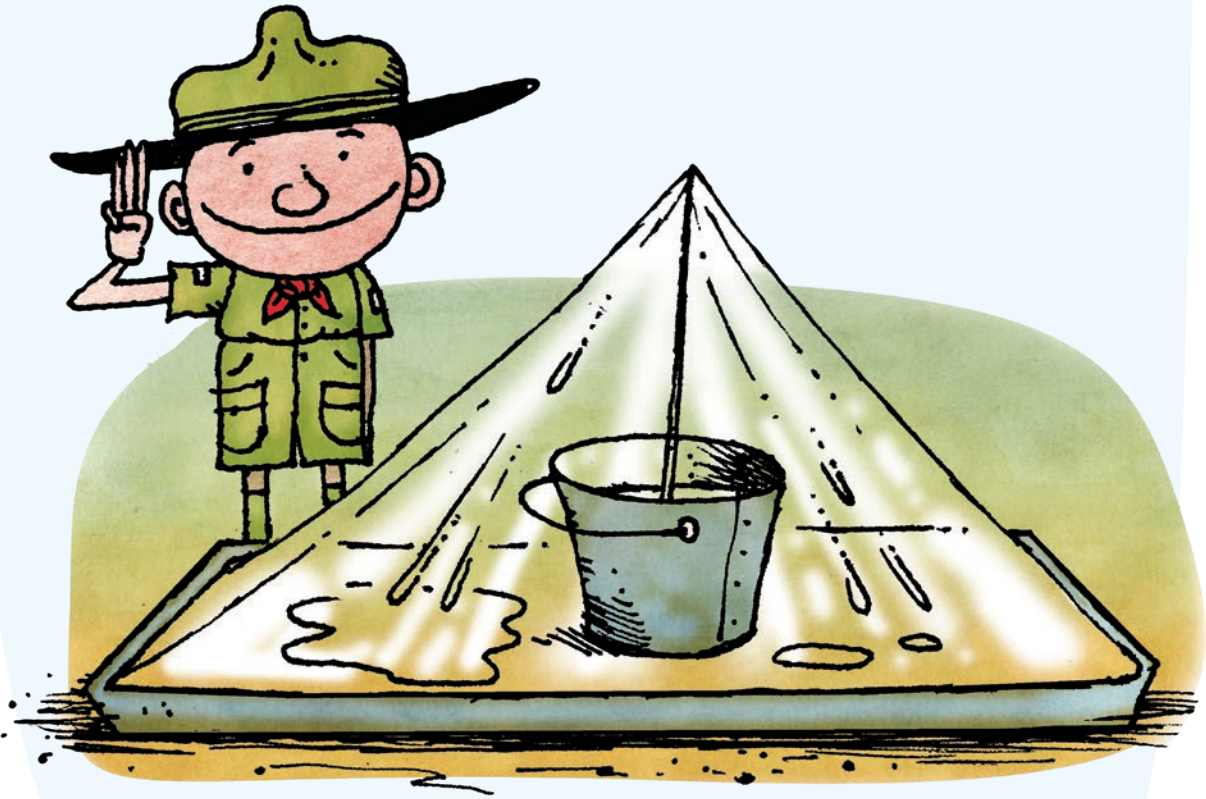
## Twig A-Peel

Or use a twig. The layer just under a tree's bark is full of tiny tubes that carry water up from the roots, but are too small for bacteria. That gave Rohit Karnik a great idea—plug a water tube with a peeled twig, and pour your water through it. Instant filter!

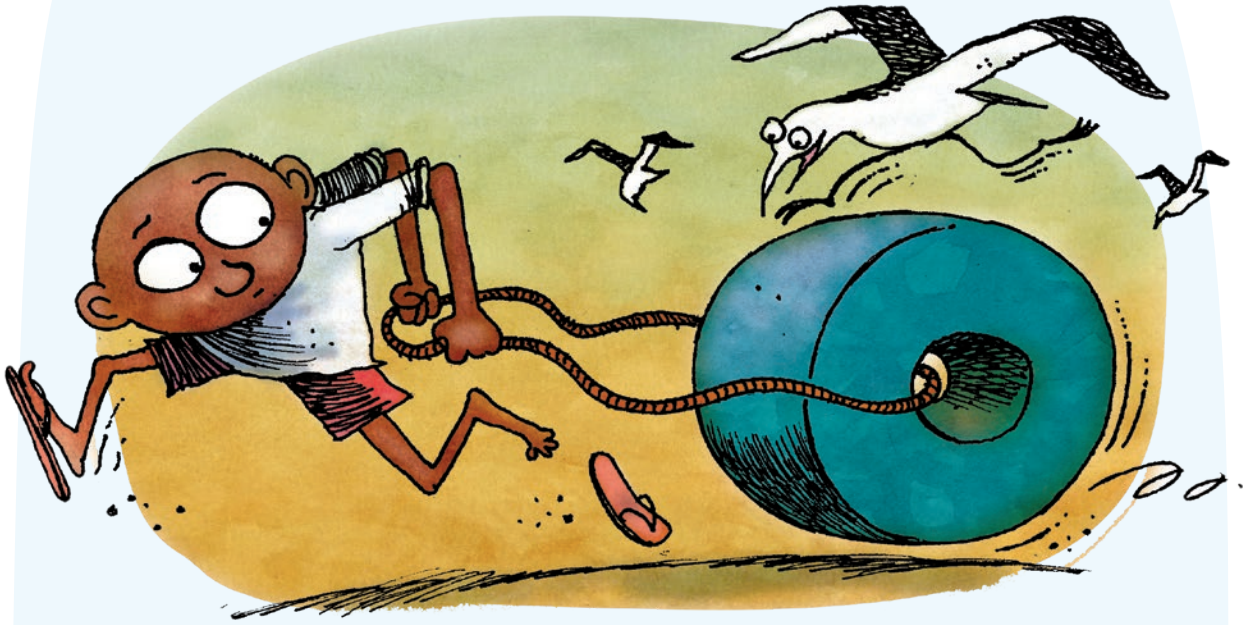


## Hold the Salt

When water evaporates, only the water molecules go up into the air as vapor. Heavier germs, pollution, and salt stay behind. So to make fresh water, put a dome over dirty or salty water and set it in the sun. As it heats up, the water will evaporate, hit the dome, and run down the sides as drops of fresh water. It's not fast, but it is cheap!





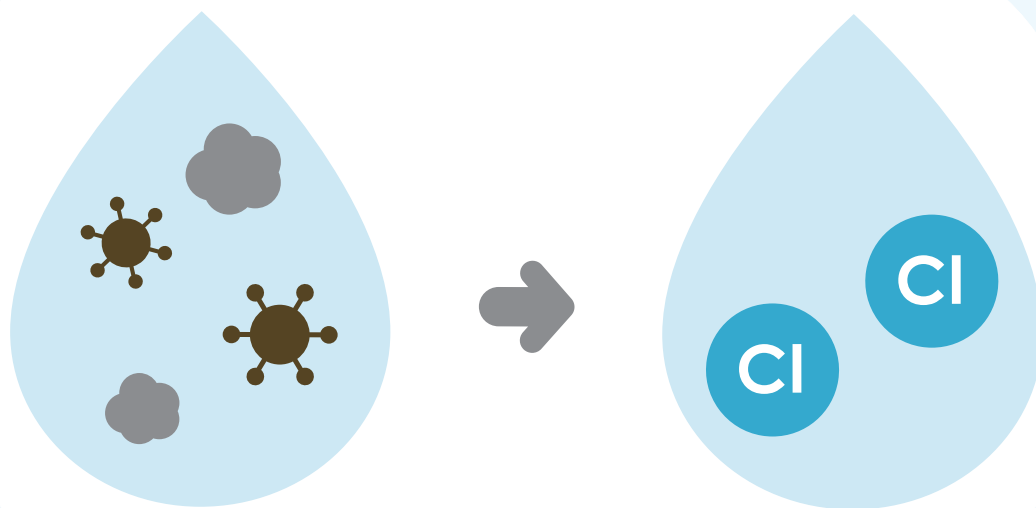


## Water Wheels

Once you've got your water, how are you going to get it home? Clever round water containers make it easy to move a whole lot at once. That means fewer trips to the well and more time for other things, like inventing.

## Electric Chlorine

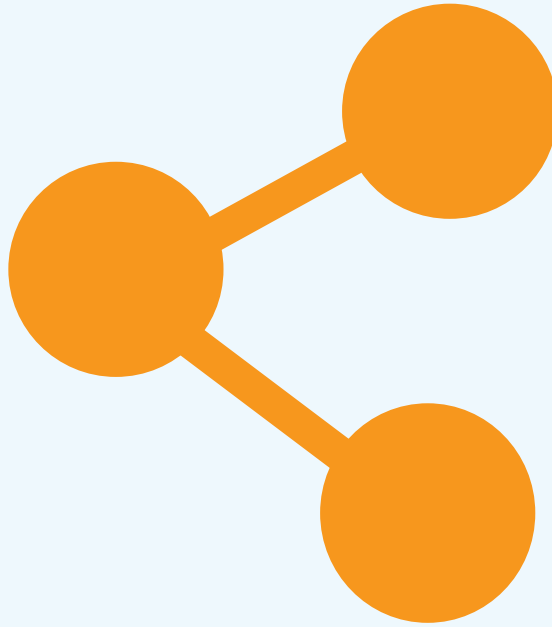
Adding chlorine is an easy way to kill germs in water. And chlorine can be made pretty cheaply in a simple lab by running salt water through an electrically charged pipe.



Is that why  
they add  
chlorine to  
pools?

I thought it was  
for the taste.





**Good ideas are made to share! Once a clever new idea takes off, it often spreads on its own, as people see their neighbors making light with bottles, or taking fewer trips to get water, or not coughing while they cook.**





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