

Make your own water clock

Clepsydra (meaning water-their in Greek), also called a water clock, is an ancient device that uses a controlled flow of liquid to measure the time. The water clock is often associated with ancient Greece, but the earliest water clock actually appeared many years before the Greeks embraced it. Experts believe the very first device of this type was buried in the tomb of Egyptian Pharaoh Amenhotep I in 1500 BCE! The water clock was then introduced to ancient Greece by Plato in 325 BCE. However, it may also have been an invention of the Chaldeans of ancient Babylonia.

The water clock's mechanics were nothing short of brilliant. Early on, there were typically two types: outflow and inflow. An outflow water clock uses a container that has markings on the inside. Water flows out of the container at a constant pace and the markings show how much the water level has dropped and, consequently, how much time has passed. An inflow water clock is similar, but the water flows into a second container that has markings on its interior. The bowl slowly sinks thanks to a small hole in its base, which shows the passing of time. Plato took the mechanics one step further, using an inflow water clock with an intricate mechanism that made a whistling sound when air was forced through it. His device is considered the first-ever alarm clock!

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What you'll need:

- Large, clear plastic bottle
- Round-edge scissors
- Compass or drawing pin
- Marker pen
- Food coloring
- Stopwatch

CUT

First, roughly measure halfway down the bottle, then carefully cut the bottle in two using the scissors. This can be tricky, so ask an adult to help.



DRILL

Now, unscrew the top off the bottle and make a small hole in it using the compass – ask an adult to help. Then put the lid back on the bottle.



FIT

Next, turn the top half of the bottle upside down and place it inside the bottom half, so that the bottle top is facing downwards.



MIX

Now, mix a few drops of the food colouring into a pint of water, and then have your stopwatch at the ready.



POUR

Pour the water into the top of the bottle and then start timing. Each time a minute passes, mark a line at the water level of the bottom bottle.



COUNT

Once all the water has passed into the bottom bottle, pour the water back into the top half and count the minutes as the water pours down. Voila – your plastic bottle has transformed into an ancient timepiece!

