

WATER AT HOME

THE DOMESTIC FOUNTAIN

WHAT DO THE PIECES OF THE MUSEUM TELL US?

Having water at home was a luxury in the Roman times. Most of the inhabitants lived in buildings located in residential blocks (*insulaes*) and had no running water supply. To provide themselves from water they needed to go to one of the various public fountains.

There were, however, single-family residences (*domus*) with private baths and gardens decorated with fountains and ponds, a symbol of social status and luxury.

In the museum, you can observe a domestic fountain originally from Tarraco, where the water that entered through the inferior part went up to the central container and arrived to the top vessel from where it fell through the shell and through the exterior stairs or the "rytha" with animal heads that some kids wear in their hands.



Domestic fountain
First half of the II century AD.
Marble.

WHAT WE NEED:
3 RECYCLED BOTTLES WITH CAPS
STRAW
CUTTER
SILICONE DRILL

HYDRAULIC DEVICES

At that time, all kinds of devices were invented to provide water impulses that led to the development of fountains. Heron of Alexandria was a mathematician, physicist and inventor of the 1st century BC who invented a hydraulic machine known as Heron's fountain. Shall we build one?



Using silicone, glue two plastic bottle caps and cut 2 holes with a drill.
Pass the corresponding straws (tube 1 and 2) (tube 1 and 2) and seal them well with silicone to make it hermetic.



Attach the cap of the third bottle (A) to the butt of the middle bottle (B) and make 2 holes with a drill. Pass the corresponding straws (tube 1 and 3) and seal them well with silicone to make it airtight.



Cut the third bottle (A) in half to act as a recipient holder for the fountain. Fill the middle bottle (B) with water without overfilling the tube 2.

OPERATION

The Heron's fountain uses pressure effects. When a liquid is subjected to a difference in pressure, it flows to try to balance the difference.

To make it work, we need to put some water in container A.

The water in container A will flow down by gravity into container C through tube 1.

Container C will fill up with water, there will be less and less air volume and, therefore, the pressure will increase.

This pressure will rise to container B through tube 2.

As the pressure in container B increases, it will push the water from container B to container A through tube 3.

