

Siphon? More Like 'So Fun!'

Try It Out

Find the end of the long strand of beads in the cup. While holding the cup handle with one hand, use the other hand to fling the end of the strand up and over the side of the cup in a quick up-down motion, letting go of the strand below the cup. How do the beads continue to jump up out of the cup like that?

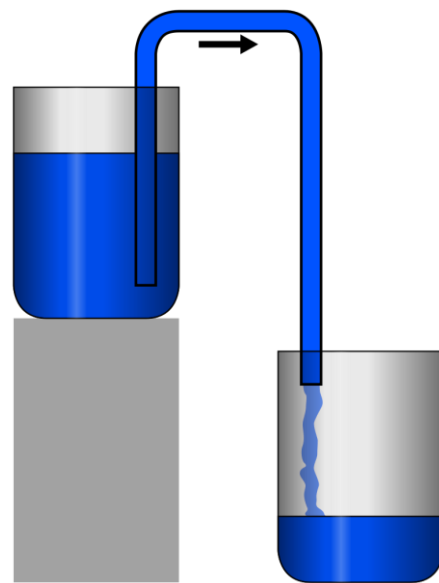
Please put the beads back for the next person.

What's going on?

A **siphon** is a tube used to move a liquid from one container to a lower container. These beads aren't exactly a siphon, but they demonstrate *some* of the same basic physics principles. Gravity causes the strand to continue to fall once out of the cup, and Newton's first law tells us that the force of the falling beads will exhibit a force on the rest of the strand, causing it to overcome inertia and follow the same path up and out of the cup.

What's the big deal?

Siphons have many valuable applications, as you can imagine how important it is to be able to efficiently move water around. Siphons can be used in irrigation systems to keep crops watered, and in city waterworks. They can even be valuable in the flushing action of toilets!



A demonstration of the siphon principle. (Image: Tomia)

Wonder While You Walk...

Would a siphon still work if there were a tiny bit of air in the top part of the tube? What about a little more air? How much air would it take in the tube before the siphon stopped working?



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