

The Ring of Fire

Materials Needed:

Bottled water, Nail, Aluminum foil, Rubber band, Clear acrylic tube, preferably between 27" to 36" in length (PVC pipe also works), Paper towels or cotton cloth

Instructions:



Push the nail through the cap of the bottled water.



Wrap the aluminum foil around the outside of the bottled water. Try to make the foil as smooth and closely connected to the water bottle as possible. There should be about two to three inches of space between the lid of the water bottle and your aluminum foil.

Use the rubber band to hold the foil in place. You now have a functional Leyden Jar.



To charge the Leyden Jar, hold the plastic tube in one hand and rub a clean paper towel or cotton cloth against the length of the tube. Continue sliding the cloth against the length of the tube until you can feel the static charge or hear it crackling. Continue sliding the cloth against the tube as you slide the tube against the nail sticking out of the Leyden Jar. The static electricity will transfer from the tube to the jar through the nail. It's important that another person is holding the Leyden Jar, gripping the jar by the aluminum foil while you're charging it.

The Leyden Jar should now be charged. Hold it by the aluminum foil and touch the nail if you want to check it. It should give you a small shock. Note that a Leyden Jar loses all of its charge after the nail is touched. You'll need to go through the step above again in order to recharge it.



To create the Ring of Fire, have a group of any size stand in a circle, holding hands. The only disconnect in the circle will be where the group connects with the Leyden Jar. One person will hold the Leyden Jar by the aluminum foil in one hand and hold hands with the group with the other. The person who would have held the hand that is holding the Leyden Jar will touch the nail instead. Now the entire group is connected, either by holding hands or by connecting with the Leyden Jar. The whole group will feel a shock. Make sure that everyone else in the group is holding hands before the Leyden Jar connection is made.