WATERTIGHT

Bet you can’t pull apart two wet glasses!

THE SETUP
You will need two heavy plastic water glasses that are the same size. Put one inside the other. Drip water around the rim of the outer glass so that a thin layer of water forms between the two glasses. Try to separate them by pulling them apart.

INSIDER INFORMATION
The water acts like glue, holding the glasses together. Nature has put in a double fix here. The first is cohesion, which is the force pulling water molecules together. The second is adhesion, which is the attraction between water and the glass. Only in a tiny place like the one between the glasses can they combine to form such a powerful bond.

Since you have those two glasses stuck together, it’s only fair play to tell you the secret of how to get them apart. Cool the inner glass by filling it with ice water. While the water is still in the inner glass, run hot water around the outside glass and immediately pull them apart. If you don’t act quickly, the glasses will stick even more tightly. The outer glass expands from the heat and the inner one contracts from the ice water. The small difference in size is large enough to break the seal of the water so you can pull the glasses apart.

If all else fails, just wait. Sooner or later, the water making the seal will evaporate and then it’s a snap to pull dry glasses apart.