

# How Does Gravity Effect Water?

Can you keep water inside a bucket if you turn it upside down? Try this experiment to see if you can keep water inside the bucket without spilling it.

## Steps:

1. Fill the bucket three quarters of the way with water.
2. Take the bucket by the handle and start spinning it around at your side from the ground, up to the sky, turning your arm behind you as the bucket makes it way back down towards the ground.
3. Keep the speed and motion of rotation the same.

What happens? Does the water stay in the bucket or does it spill out of the bucket?

If you keep the speed up and a smooth motion of the rotation going around with your arm, the water will stay inside the bucket. This is due to the force of gravity pulling the water towards the center of the earth as the bucket heads down and as the bucket of water goes up towards the sky the motion (or direction) of the water is forced to stay inside the bucket (the wall and bottom) as it can not escape from inside the bucket.