People have classically put gravel or broken pot shards into the bottom of pots to aid drainage and to keep drain holes open. This does not improve drainage and, depending on the depth of your pot, may actually harm a plant.

This concept may not seem logical, but it is based on the science involving water behavior.

Three forces have an effect on movement of water through your potted plants: First, gravity pulls water through the soil toward the drain holes. Next, water tends to adhere to itself which is the reason why water bulges above a water glass when over-filled. Lastly, water has a force causing it to stick to soil particles. This adherence, or stickiness, to particles is stronger with smaller soil particles than larger ones.

After excess water has drained from pots, some of the remaining water will percolate down to a level where the pull of gravity is offset by the tendency for water to cling to soil and it will stop. This layer of wet soil is called a perched water table and is present in pots even after the top part of the soil has become dry.

When gravel or any similar material is added, the perched water will cling to the smaller soil particles and will not cross over onto the larger gravel. Therefore, the pot will not drain better with gravel. Gravel simply moves the perched water table up in the soil, perhaps into the plant's root zone, which may promote disease.

If you feel a need to keep the soil out of the drain holes, use a small meshed screen in the bottom of the pot. Always use a good grade of sterile commercial potting soil. Most of these soils are light and drain very well. Do not use garden soil. It is much too heavy, drains poorly and may carry disease organisms harmful to houseplants.

Myth Busted: Don’t Put Gravel in Pots