



HOW DO YOU CLEAN WATER?

EASY
▶ MEDIUM ◀
HARD

YOU'LL NEED:

- 1 large plastic bottle
- 1 pair of sharp scissors
- 1 large jam jar
- 1 glass
- 5 teaspoons of earth
- 1 large cup of clean, coarse gravel (stones of the size of your thumb nail) or hydroculture stones
- 1 large cup of clean, fine gravel (stones of the size of the nail of your little finger)
- 1 cup of coarse sand



1. Cut the bottom out of the plastic bottle with the scissors.
2. Hold the plastic bottle with the top down and fill it with first sand, then fine gravel, and coarse gravel at the end.
3. Drill a little hole into the bottle with the scissors, near the neck. Stand the bottle in the large jam jar with the top down.
4. Prepare your "dirty water". Take a glass, fill it with water and earth. Mix it well and wait a little until the larger pieces of earth sink to the bottom.
5. Slowly (!) tip the dirty water into the large opening of the bottle. Keep a little of the dirty water.
6. Watch the water and compare the rest of the "dirty water" with the water trickling into the jam jar from the bottle.

WHAT HAPPENS?

You have filtered the dirty water, or “purified” it. The water running out of the bottom of the bottle looks much clearer than the “dirty water” you poured in at the top.

WHY IS THAT?

The water first trickles through the layer of coarse gravel, then through the layer of fine gravel, and finally through the layer of sand. The coarse gravel filters the coarse dirt out of the water, the fine gravel filters the finer dirt, and the sand cleans the water of the finest pieces of earth.

WHAT DO I NEED THIS FOR?

Exactly what you did happens when it rains, too: The water trickles through the earth and the different layers of rock deep down. Until the water is in the deepest layers of earth, it is completely clean! The water deep in the earth is called ground water. Through a well it can be pumped up and even used for drinking.

BY THE WAY:

Water purifying plants work similarly. The water is filtered and so dirty water becomes drinking water in our water pipes again.

