

Safety:



Instruments:

- a glass or plastic bottle
- a funnel
- a beaker
- balloons

Chemicals:

- water-activated fizzy tablets
- tap water (in the beaker)
- helium gas (H: 280; P: 403)

Experiment:

- Place ten crushed up tablets in a bottle.
- Add about 100 ml water and seal the mouth of the bottle with a balloon.
- Blow up a second balloon to the same size as the first by breathing into it.
- Drop both balloons from exactly the same height and observe their movement. Then throw them up in the air together.
- A third balloon filled with helium can also be added to the game.

Advice for the teacher:

The balloon over the bottle quickly fills with carbon dioxide from the tablets. During the game, the CO₂-filled balloon falls to the ground more quickly than the air-filled one. Therefore, CO₂ must be denser than air. The helium balloon flies upward, since helium is lighter than air.

The pupils should learn that (most) gases are invisible. Despite this, however, we can explore their properties. Some gases are lighter than air and rise. Others are denser than the air and sink to the ground.

Tip:

In the case that no helium tank is available, many stores sell balloons with helium for birthdays, parties, etc.