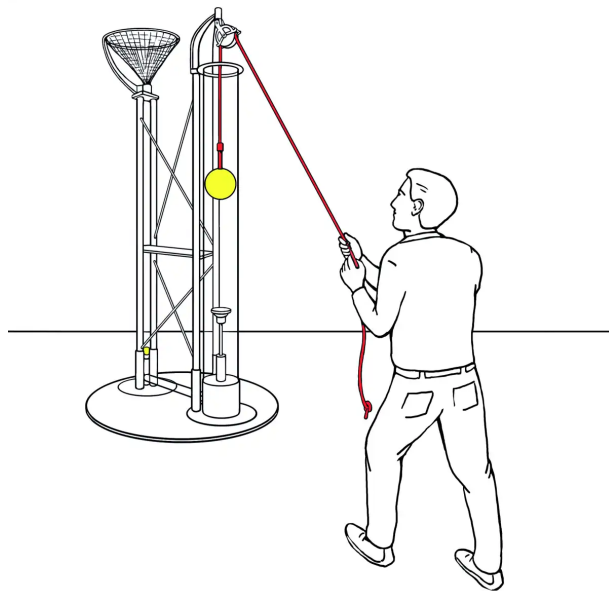


Bowling ball canon

What happens when you drop the bowling ball at different heights?



Pull the string to lift the bowling ball and let it go.

Try different heights for the ball. What is the difference?

In one tube the bowling ball falls down, in the other tube the tennis ball is being catapulted skyhigh. The bowling ball compresses the air below. The air is pressed into the second tube via a connecting tube and the tennis ball is accelerated.

The potential energy of the bowling ball (due to its height) is being transformed into kinetic energy of the tennis ball. By the ratio of the two masses (bowling ball: 7 kg and tennis ball: 57 g) one can calculate the maximum height of the tennis ball (depending on the height of the bowling ball). However, during the compression of the air energy is lost: air can escape and the compression does not act like a perfect spring.