

A smartphone can be included in many different ways in class. You can use it to document your experiments. You can use it as a Encyclopedia, or as a medium to exchange data. But most of all it can be used in experiments.

Modern smartphones have built-in sensors, such as an accelerometer a rate sensor and a magnetic-field sensor. Data can be recorded from these sensors and made accessible through Applications.

The students can either experiment on their own or the experiment can be done by the teacher. This was the major part of my thesis, to show how useful the use of the smartphone can be and how it can be put into effect in 10th grade physics education.

The use of a smartphone has been evaluated in experiments that show the free fall of an object, Newton's laws, circular motion and oscillations.

Driven by the motivation to use their own smartphone in class, the interest of the students has been awakened. Through this matter there has been a great learning progress by the students.

Being an incentive, students are also motivated to explore their environment by using their smartphone. They can try to measure the acceleration and forces during their ride to school, but also try to measure a roller coaster ride.