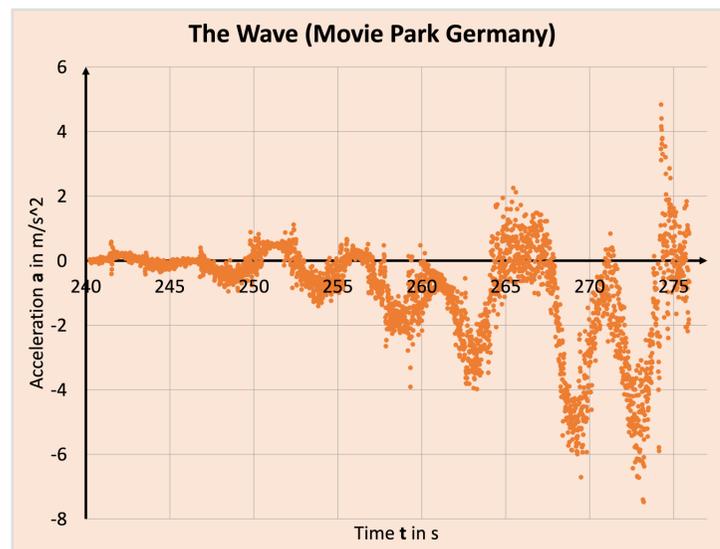
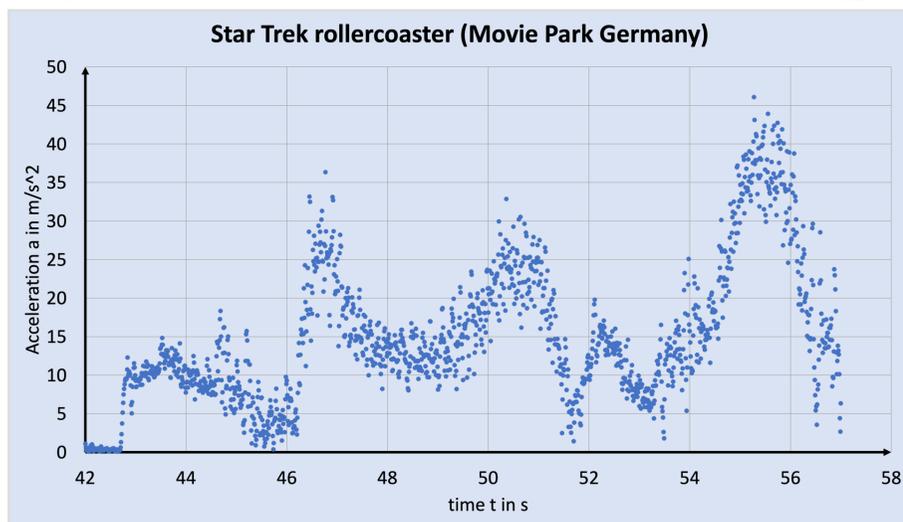


Technologies in STEM education

Robin Rozmann, M. Ed. | Städt. Leibniz-Gymnasium | Gelsenkirchen | Germany

Pupils become measuring devices

Digital examinations on amusement park rides



The **smartphone** has become an indispensable part of our everyday lives and those of our students. In this project, they learn in different grades about **the smartphone as an extremely precise and useful measuring device** with which they can quantitatively explore their surroundings. With the smartphone in their closed pockets, learners ride a ride together, **combining a lot of fun with recording quantitatively good data**. The recorded data file is uploaded to a folder in our educational network immediately after the ride and evaluated and interpreted in subsequent lessons.

In preparation for the excursion, **low-cost experiments** that I have developed and built myself with the help of a 3D printer **will be used in class**. The focus of these experiments is on working with the smartphone as a measuring device and using the necessary free apps. In doing so, the **necessary physical basics** for the analysis of the rides in the amusement park are being developed on the basis of the students' own guiding questions.

Experience shows that this approach **increases the intrinsic motivation** of the students.

