The **ScienceMath**-project: **Experiments to investigate decaying processes**
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Background

General didactical background

The basis of this sequence is an interdisciplinary approach with sciences especially with Physics. The pupils shall experience Mathematics in an appropriate, interesting and important way by the means of extra-mathematical references. Learning in interrelations shall contribute to an intuitive mathematic understanding. With the aid of scientific contexts and methods the gap between formal mathematics and authentic experience shall be closed and on the other hand the variety of mathematic items shall be experienced.

Mathematical background

It is required that students should be familiar with different functions describing growth, especially stunted growth. In addition to that students should know how to use methods of regression, at least they should know regression tools by using certain software (in the presented material, students used Excel to graph trendlines and their graphing calculator to graph regression functions).

Physical background

Concerning physics no special knowledge is required. This material is to learn or deepen experimental skills, particularly analysing measuring values. Especially the beer foam experiment can be used to become acquainted with decaying processes and the concept of half-time.

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