

Sample task 1

Sports physiology and statistics

Imagine you are a sports physiologist and you have to interpret measures

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Classroom materials,
motivating pupils for
math and science



World of Work ?

Becoming a(n)... Physiologist



World of Work Dimensions

Context

To be able to help someone to improve their condition, a sports physiologist takes measurements (heart rate) before and after a training program.

Role

Students are not placed explicitly in the role of physiologist. However, they are introduced to techniques that are regularly used by sports physiologists.

Activity

Students measure heartbeats in order to make predictions about the level of physical fitness using the Ruffier-Dickson-test and the Ruffier-Dickson index.

Product

The product is an investigation of different relationships between the Maximum Hart Rate, the age of a person, and advise for a training program.


Abstract

This module is a part of the lesson series 'Statistics as a bridge between Mathematics and Science'. In this module you will learn how to do this and how to represent such a relation mathematically and calculate how strong a correlation is. In many professions people perform statistical tasks that use the statistical techniques from this module to solve science problems

Documents

- Teacher: [PDF](#) and [WORD](#)
- Student: [PDF](#) and [WORD](#)

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? Inquiry Learning

Inquiry Learning Dimensions

- Exploring situations ✓
- Planning Investigations
- Experimenting systematically ✓
- Interpreting and evaluating ✓
- Communicating results

Discipline

- Mathematics ✓
- Biology ✓
- Physics
- Chemistry
- Engineering

Target group

- Primary Education
- Lower Secondary Education
- Upper Secondary Education ✓

Age range

15-18

Duration

120 min.