“CLEAN ENVIRONMENT – CLEEN SCHOOL CLIMATE WITH CREATIVE ENVIRONMENTAL PRACTICES IN SCHOOL EDUCATION”

2023-1-NO01-KA 220-000159229

Lesson Summary: Introduction to Mathematic and Sustainability

Grade Level: High School (Grade 13)

Lesson Title: Understanding the Intersection of Sports and Sustainability

Objective: Which parts of the Norwegian curriculum in Mathematic is relevant for our Erasmus project? And how do we teach the students about sustainability?

Key Topics;

In the curriculum for mathematics in secondary education in Norway, goals are set for what students should be able to achieve after completing their education. When it comes to specific curriculum objectives related to sustainability, there are not many directly within the mathematics subjects. Instead, we need to look at the general part of the curriculum.

In the general part:

- sustainable principles and perspectives should be integrated into teaching in an interdisciplinary manner, allowing students to understand the importance of sustainable development in various contexts.
- understanding the connection between economic, social, and environmental factors, as well as the ability to assess the consequences of various actions and choices from a sustainability perspective.
- the general part of the curriculum emphasizes that education should contribute to the development of attitudes and values that promote sustainable development, as well as the ability to act in accordance with these values
- provide students with knowledge and skills to participate in sustainable development at individual, local, national, and global levels.

Activities

- **Statistics and environmental data:**
- Students may be asked to collect data on resource consumption in their home or community and then use statistical methods to analyze and interpret this data.
- **Geometric modeling of land use:**
- Students may be asked to design an ideal sustainable residential area using geometric principles
- **Mathematical models for population growth**
- The task may involve the use of mathematical models such as exponential growth or logistic growth to study population growth and resource use over time. Students can explore how various factors such as birth rate, death rate, and access to resources affect the sustainability of a population

Conclusion:

- Here are some examples of how sustainability and environmental issues influence the subject of mathematics in Norway. Students encounter such tasks at all levels, regardless of which mathematics course they choose. In this way, they encounter questions about sustainability and the environment across subjects, and they work on this throughout their education in the Norwegian school system.