

Lesson Scenario

no.1

BASED ON THE STEM
LEARNING CONCEPT AND
METHODS OF NON-FORMAL
EDUCATION

ABOUT

The STEM concept is an educational idea concerning the subjects of Science, Technology, Engineering and Mathematics. Rather than dividing them into separate curriculums, as in the traditional system, the new concept focuses on an interdisciplinary approach. This way promotes finding connections and is more in touch with modern labour market.

The STEM approach is based on activating pupils in the classroom and providing a "hands-on" experience which enables young people to learn based on their own findings. This project based style creates also a chance to develop soft skills and practice cooperation, group work and problem solving abilities. Combining the STEM idea with non-formal learning methods promotes self-awareness about personal development, builds confidence and, above all, fosters motivation through curiosity.

PING PONG BALL OBSTACLE COURSE

Using the air stream provided by hair dryers pupils will balance a ping pong ball and move it around an obstacle course. This provides a fun way to learn about vectors of force and Newton's laws of motion.

For whom?	6th / 7th Grade
How much time do you need?	2 x 45 minutes
What will you learn?	Newton's laws of motion Vectors of force Geometry
What soft skills will you develop?	Working in groups Organizational skills Competing as a team Performing under pressure
What do you need?	2-3 Hair dryers per group Couple of ping pong balls PVC pipes for the obstacle course Stopwatch

INSTRUCTIONS



01.

Divide the class into teams of about 5 pupils

02.

Each group builds their own obstacle course

03.

Practice session - time to try out each course

04.

Teams try to put the ping pong ball through each course in the shortest time

05.

After completing a course each team moves on to the next one including their own

06.

Summing up all the times and finding out who won

07.

Discussion on the movements of the ping pong ball and the experience

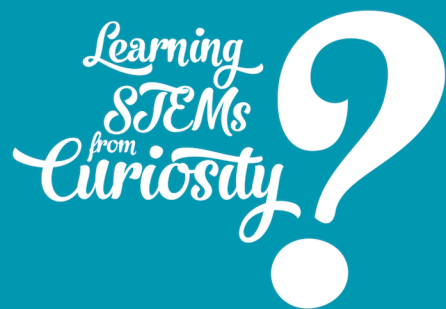
This lesson scenario was prepared by the participants of an Erasmus+ Youth Exchange Project titled Learning STEMs from Curiosity.

Participating Organizations:

Stowarzyszenie Przyjaciół Szkoły Podstawowej nr 1 w Barczewie

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For more information and resources please visit the project website by scanning the QR code below.



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