

# Mobile technology classroom at Neeme School, Harju County

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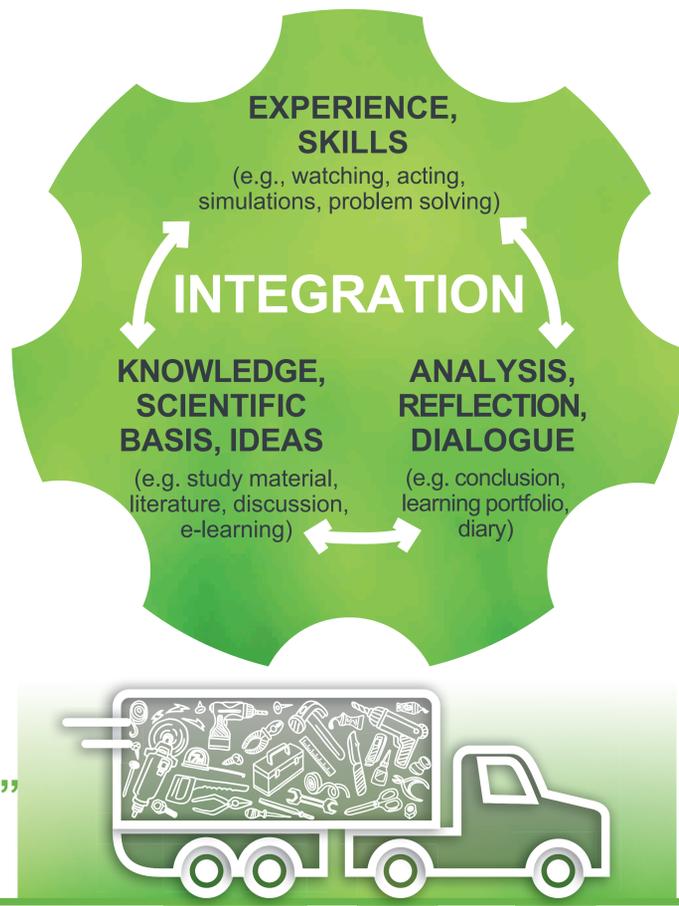
At Neeme School, the pupils of the 4th to 6th form study technology in an innovative mobile classroom. In the course of studies, cooperation with leaders and entrepreneurs in the field of natural sciences, exact sciences and technology is carried out. Through critical thinking, problem solving skills and advanced technology young people learn about real-world product development processes, relying upon the fundamental truths in the field of sciences, engineering and mathematics.

## Problem

Young people in Estonia have little opportunity in the II and III stage of study to get acquainted with modern technology and **the computer numerical control equipment** (CNC benches). Schools lack resources and installations to upgrade their equipment fleet and the teachers have little experience in applying modern technology in their subject classes. Industrial companies face great **shortage of skilled workforce** and the specialities in the field of technology and engineering need **offspring** – therefore it is important that the young would have possibility during their basic school studies to become familiar with modern work techniques and the ways of materials processing.



**“Knowing comes from learning, finding from seeking”**  
Vaddey Ratner



## Technical solution

The Merkuur team has developed **mobile workshops** with the aim to familiarise young people with professions, work techniques and work equipment in the sectors of metalwork and woodwork, and by the method of hands-on to offer the possibility to try out the profession-related work tasks in order to raise the young people’s career awareness and competitiveness in the fields related to technology and engineering.

## Significant learning and activity-based teaching

(Fink 2003)<sup>1</sup>

**The taxonomy of significant learning** is divided into six categories: foundational knowledge, applied skills, integration, personal and human dimensions, caring, learning and learning how to learn.

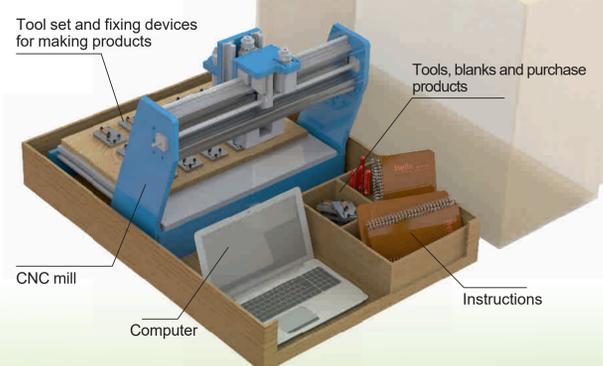
**Activity-based teaching** or active teaching guides young people into a situation where they need to talk, listen, think, act and write. Active teaching uses a variety of teaching methods that aim to address a question, task, or problem that requires a solution.

(Sell 2013)<sup>2</sup>

## Integration of STEM in the framework of technology education classes

The Merkuur team has elaborated **modern teaching methods**, with the help of which we introduce CNC equipment to young people, apply what they have learned in both individual and team tasks, related to product development, test different material processing methods and make wood and metal products together with the young. Young people come across real-life engineering issues and make products, which are **actually significant and needed**.

## Modular workshop unit



REFERENCES: 1 Fink L.D (2003). *Creating Significant Learning Experiences: An Integrated Approach to Designing College Courses*. San Fransisco: Jossey-Bass  
2 Sell, R (2013). *Mehhatroonika ja robotika õpistuastsioonid*, ITT Group

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