

# Hands-on-Science/School Robotics

**The “Hands on Science” course on robotics is directly linked to a Comenius network dedicated to science education. Highly experienced trainers provide school teachers from primary, secondary and vocational schools with the teaching and technical tools they need to teach robotics successfully.**

Educational research has shown the many advantages of hands-on science programmes. Piaget’s – and Papert’s later research on constructivism – clearly mandate that the learning environment be rich in physical experiences. Involvement is the key to intellectual development and, for the elementary school child, this includes direct physical interaction with objects. This course has been delivered several times and continuously demonstrates the benefits of hands-on experimentation. It helps increase the efficacy of science and technology classes while improving essential skills such as autonomy, responsibility, critical reasoning, organisation, commitment, motivation, self-praise and social interaction.

Course-related documentation is very complete and allows participants to quickly engage in discussions about hands-on experiments as well as constructivist teaching and learning approaches. Primary and secondary school teachers are identified as different target groups and the methods are adapted accordingly. The course culminates in a robotics festival where pupils present their robots. Their creations compete in a variety of challenges.

This course adds three extra dimensions to science education. It brings together groups of teachers from different European countries to focus and experiment with experts who speak the same scientific language despite their own native languages. It also injects fun into the learning process. It is often forgotten that science can be – and actually is – fun. Robotics makes learning attractive because it achieves concrete tangible results and adds movement to those results. And, finally, hands-on robotics is one of the best ways to strengthen the link between school and work, developing major skills that are necessary for pupils to succeed in their professional careers. The hands-on training course successfully combines transversal and key curricular skills within a very attractive and motivating framework.



## In-Service Training course: Hands-on-Science/School Robotics

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