

# STEM TEACHER EDUCATION: EXTRA-CURRICULAR

## SCIENCE LABS FOR GIFTED LEARNERS

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To attract young people to science, technology, engineering, and mathematics (STEM), research centers and universities have established numerous extra-curricular science labs where school students perform high-tech hands-on experiments. In order to connect this type of extra-curricular education with the school curriculum and to ensure a sustainable effect on the students, teachers have to assimilate the students' respective experience. This means they have to personally perform the experiments, i.e. they have to adopt the role of their students. Furthermore they have to incorporate the scientific as well as the didactical context of the experiments.

This paper describes the teacher education concept developed at the DLR\_School\_Lab Oberpfaffenhofen how to interconnect science labs and the school curriculum, including self-experimentation, science background, and didactical context – which is especially suitable for teachers of gifted learners.

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