

Math and sciences: different subjects, but one common goal for STEM

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In regular school practice around the world mathematics and the sciences are still taught as separate subjects. From a STEM perspective, this non-integrated approach is detrimental. In several projects in the Netherlands we have been quite successful in connecting mathematics and science, although there is still room for improvement. The innovative Nature, Life sciences and Technology (NLT) curriculum integrates the sciences and math (which will be addressed in greater detail in Eijkelhof's keynote and a break out session). In another project we tried to design materials using math and physics as individual but strongly interconnected subjects. We will look at the challenges that appeared when trying to bring the two subjects closer together to help students (and teachers!) see that the two subjects are two sides of just one coin. Some of these challenges are described in the chapter 'Algebra in science and engineering' of the book *Secondary education in algebra* (see the website for this document, pp 203-226). In this session these challenges are presented and discussed along with related hands-on activities.