Using the results from the Understanding Participation rates in post-16 Mathematics And Physics project (UPMAP), Professor Michael Reiss will examine the issue of why students take up, or do not take up, maths and science once these subjects become optional.

Once students are no longer required to do certain subjects, participation depends at least in part on how students see both themselves and the subjects. Each can shift as a result of experiences inside and outside the classroom. The UPMAP project used questionnaires from 141 schools across the UK, undertook interviews with some of these students, as well as interviewing first undergraduates.

The overall conclusion of UPMAP is that young people are more likely to continue with mathematics and/or physics after the age of 16: if they have been encouraged to do so by a key adult (usually in their family or at their school); if they believe that they will gain from studying the subject in terms of job satisfaction and/or material rewards; if they are can manifest conceptual understanding in the subject/s, and if they have been well taught.