



# Excellence Tracks in Middle School Offered by the Ministry of Education



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### Science-technology specialization

*(Responsible body: Science and Technology Administration, Ministry of Education)*

This is a school intervention program whose goal is to increase the number of students graduating five-units in mathematics and in two other science or technology subjects. The program operates in 279 schools across the country, most of them large 7<sup>th</sup>-12<sup>th</sup> grade schools. Participating schools establish a separate homeroom class for the program's students. This class receives additional hours of study, mainly in the areas of physics and computers. The class uses special learning materials and has good teachers assigned to it.

Following six years of operation, in the schools where the program was conducted, there was an increase in the percentage of graduates having completed five units in three subject-areas – from 8% in 2012 to 14% in 2017 (an improvement similar to the nationwide increase in the percentage of students completing five-unit mathematics). The National Authority for Measurement and Evaluation in Education is currently completing its research and evaluation of the program's success and of its impact, both on participating students and on all students, as a result of this educational program being implemented in their school.

### "Fulfillment and Excellence"

*(Responsible body: Secondary Education Division, Ministry of Education)*

This is a middle school program to advance outstanding mathematics students and students who have difficulty in mathematics. The program began as a pilot study in 2003 in 50 middle schools and in 2010, was implemented in all schools. Along with three ability groupings in mathematics (A, B, and C), the program created another two groupings: "Excellence" for outstanding students and "Fulfillment" for students with difficulties. Special learning materials and appropriate teaching methods were developed, as well as professional development and pedagogical support for teachers. The Excellence program was carried out by the Technion and the Fulfillment program, by the Hebrew University.

The evaluation studies which accompanied the program indicated a significant improvement in the achievements of the students who have difficulty, with an increase in their level of performance. The Excellence classes expanded significantly with no decline in the class's achievements, but with no increase either. The teachers reported a high level of satisfaction with the quality of the learning materials, the training, and the support. Criticism of the program were that it neglected the "students in the middle" and that it did not create continuity of the studies in high school. It stimulated a debate between supporters of ability groupings and its opponents, and in consequence, the program is no longer implemented throughout the system, but rather at the level of individual schools.

#### MOFET ("Mathematics, Physics and Community Culture") classes

*(Responsible body: MOFET Network)*

This is a program created in the 1990s by a non-profit association comprised of Russian émigré scientists and which operated as an enrichment center for the children of immigrants. In recent years, the program has been introduced into the schools and operates with a separate homeroom for students found suitable. The program offers special content in mathematics, physics, English, computer science, as well as workshops and empowerment activities. The program runs in 160 schools throughout the country, with emphasis on the periphery.

Evaluation studies of the program's activities have indicated a high level of knowledge and skills, positive attitude and high internal motivation among the program's students, use of algebraic techniques alongside research skills, and on the motivating effect on teachers and students who do not participate in the program, resulting from the existence of MOFET classes in the school. The program's learning materials were found to make a unique contribution; they are based on the assessment of each student's knowledge and skills and adapted to the assessment's results.

*In addition, there are activities by local education associations, in coordination with or as a joint project with the Ministry of Education, for example: Nachshon, Pre-Atidim, or Excellence 2000.*