The 3rd space educational program for high school students has been successfully carried out on 15-20 August 2004 at Sagamihara Campus of ISAS_JAXA. The purpose of the program is to cultivate the mind 'think by themselves' by experiencing the process of creating space missions, and to trigger the further curiosity from the conversation with leading space scientists. 23 students from Hokkaido to Kyushu have joined the program. We will report an overview of the program, the motivation of high school students for the study and the support concept of teaching assistants. We are planning the 4th program in this summer and hope to continue every summer.