The goal of this bachelor thesis was to translate the Representative variant of the force concept inventory test (R-FCI), which is used to diagnose preconceptions about force and motion of secondary school pupils, into Czech. In addition, the test was conducted in several classes at various czech secondary schools and was also given to the students of physics with specialization in education at the Faculty of mathematics and physics, Charles university in Prague. The participants were given the test before and after the basics of newtonian mechanics were discussed in class. The results of the survey were processed and used to discuss pupils´misconceptions and the success of their suppression as a result of teaching. The thesis is divided into three parts. The first part introduces the R-FCI test and the way the survey results are processed. The second part presents and interprets the results of individual groups in which the test was conducted. The third part consists of discussion of the most frequent pupils´ misconceptions and of the success of their identification using the R-FCI test. Finally, the results of the survey are compared with the research conducted by P. Nieminen, A. Savinainen and J. Viiri in 2010.