

## **ABSTRACT**

This thesis deals with the elaboration of learning problem-tasks related to the Standards for elementary education in the field of Chemistry. The author of this thesis worked on this topic within a project under National Institute for Education. The starting point for creating the tasks, illustrating and concretely expounding the Standards is the concept of science literacy. In this principle in chemistry instruction a broader context and a transfer to everyday life are applied. Learning tasks were created on the base of: science literacy and the results of Czech pupils in its testing, context of standards in Czech curricular system, elements of problem-based learning, types of learning tasks and cognitive parameters. During the elaboration of the tasks a pilot testing of selected learning tasks was realized. The results of the pilot testing were used in further designing more problem-tasks to cover one expected outcome in every topic of Chemistry within the elementary school curriculum. According to the methodology described in this thesis, a material named Methodical comments and tasks to the standards for primary education – Chemistry was created. This material contains a coherent set of learning problem-tasks illustrating two-thirds of the indicators from the standards for elementary education in the field of Chemistry.