This diploma thesis deals with cube solids and their application in the lessons of mathematics. It is focused on individual experiments and their analysis. Most of the experiments were implemented in Derby, England, and they are described in English language. This is followed by experiments taken in the Czech environment; while one experiment is individual, the other one deals with two children.

The next part of the diploma thesis is focused on investigation of several exercise books and their content of cube solids. Chosen exercises are looked at from different points of view and presented in a chart. As a part of judging the real situation in schools there is an interview with two experienced teachers. The interview is based on practical use of cube solids in the lessons and teachers' experience with 3D geometry.