MS48-O5 Interesting crystallography for young schoolkids: methodical receptions of teaching

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It is not a secret that the professional orientation of every young person is formed in childhood. In this respect, crystallographers are in a losing position. Despite to the fact that 2014 was proclaimed by UNESCO as the International Year of Crystallography, "Crystallography" as the subject is not included into the school program practically in any country. One can only superficially at the lessons of geometry, physics and chemistry relates to this wonderful science about crystals. But crystals have always attracted the attention of both children and adults for its beauty and perfection of forms. Popular books on crystallography in Russia (their number is very small) disappeared from the market at once because of great interest to the subject. And the training manuals, addressed to teachers working with children, are practically absent. Of course, in some centers of additional children's education in Russia there are very good geological classes, but, unfortunately, even inside them crystallography being taught unsystematically, classes are not equipped with textbooks, materials and posters; sometimes crystallography in such circles is simply no one to teach. This circumstance prompted the authors to create a textbook «Entertaining crystallography» http://biblio.mccme.ru/node/2823 (150 pages, ISBN: 978-5-4439-0081-0, MCCME: Moscow Center for Continuous Mathematical Education publishing) (fig 1). This book may be useful for students who decided to learn the basics of crystallography in amount sufficient for successful participation in school subject competitions such as at (http://geoschool.web.ru/olympiad/). . We tried a lot to present a new difficult for children material in simple language as much as possible. However, the book is not intended for easy reading. The reader will have to show some patience to master some labor-intensive sections of the manual. The authors hope that the reward of patience is the satisfaction of further study crystallography - a wonderful science of the most beautiful creations of inorganic nature. Also, this guide may be useful for crystallographic classes' teachers in the preparation of the discipline lesson plans. Each lesson in the textbook is supplemented by control questions and practical exercises in order to help in consolidation of the material. Additionally, there are sweeps for self-making some crystal 3D-models.

Figure 1. The book "Entertaining crystallography" focused on school children of different ages (left); at Moscow Open Geology Olympiad (right).

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