

Learning Science Through Models

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Abstract

Models in science, biology and chemistry are means for understanding and treatment of science problems, enabling us quick and comprehensive acquisition of abstract concepts and showing the human eye invisible structures.

They have a great meaning for the development of formal thinking in transition from concrete to formal degree of intellectual development and with this they contribute to the development of logical thinking and concluding. For this purpose, we developed a teaching strategy called learning with »self-attained« models. This means that students themselves learn from their own models, made out from available, inexpensive materials.

Self-attaining emphasizes the development of other competencies such as independence, responsibility, resourcefulness and intrinsic motivation. Practice has shown that self-attained models enable better understanding and therefore long lasting knowledge.

Keywords: Models, types of models, self-attained model, teaching and learning with models