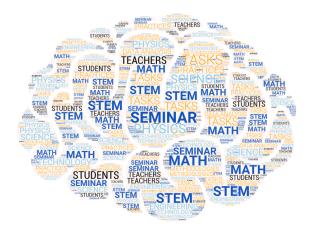
## INTEGRATED STEAM EDUCATION: A CASE STUDY IN CHEMISTRY

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## Abstract:

The problems of a global world cannot be solved by means of a single scientific knowledge, so, in modern life, it is not enough to rely on the knowledge and ideas of one of the individual disciplines teaching in schools. On the contrary, in order to solve the problems of the 21st century, it is necessary to apply the knowledge of many sciences and combine their ideas. Chemistry is a very important thing in today's education, one of the few who are developing an understanding of the world surrounding them, taking into account the implementation of the sustainable development objectives. It is a science that requires demonstrations and experiments, so teachers need to link chemistry more closely to students daily experiences, which can improve students' perceptions and achievements. In January 2021, chemistry teachers were invited to participate in individual semi-structured interviews. During the interviews, teachers were asked to describe their model of integrated STEM education, as well as to identify what methods they use in the teaching process and why. After analyzing the interview data and finding out how teachers implement STEM education, a model for realizing STEM ideas in teaching chemistry is constructed. The true value of the STEAM concept can be seen when you understand the meaning of project work. Joint projects, maneuvering between different fields, looking for innovative solutions to given problems, force students to seek answers. In that way they naturally arouse curiosity and the need to ask questions. STEAM allows teachers to adjust educational methods as well as the amount and manner of content delivered so that students can come to similar solutions in different ways, depending on what is most effective for them. In this way, both very gifted children and those with learning difficulties are able to rise to the heights of their abilities, and even exceed them. Each problem can be broken down into smaller parts, allowing students to see it from different perspectives.

Keywords: STEAM; chemistry; chemistry teacher; semi-structured interview; project work.