SEVEN publicações acadêmicas
EM PARCERIA COM: IEMS UNIASSELVI

Nanoscience, nanotechnology and mathematics: Development of a workshop with high school students

Aline Picoli Sonza[1].

ABSTRACT

Nanoscience studies the potential and properties of materials and promises to revolutionize the way we live, work and communicate. Therefore, it is believed in the importance of creating spaces for discussion about this theme in schools. To this end, a workshop was developed with high school students in order to introduce the study of Nanoscience and Nanotechnology in order to contribute to the construction of scientific knowledge from an approach involving mathematics. The development of the workshop enabled the relationship between different contents of Mathematics involving scales, surface areas and volume of geometric solids associated with Nanoscience. The workshop was offered to students of the sixth semester of the Integrated Course in Informatics and took place in the after-hours of regular classes in three meetings that took place over two weeks. The proposal was implemented with the introduction of problematizing questions, videos on the subject, expository part, experimental part, questions about the development of the proposal. The evaluation of the workshop was continuous and through dialogue, debates promoted, records made, perceptions of each specific moment during the development of the workshop and at the end with the application of a questionnaire. The involvement of all students was analyzed and the participation of all students was encouraged. The evaluations allowed us to identify that the development of the craft could contribute to the learning of different contents of Mathematics related to scales, surface areas and volume of geometric solids associated with Nanoscience, in addition to contributing to the scientific education of students, since the theme is of great importance nowadays.

Keywords: Nanoscience, Nanotechnology, Mathematics, High School.

[1] Federal Institute of Education, Science and Technology of Rio Grande do Sul – R.S.