

of Earth. The stick (gnomon) should stay in vertical position in the leveled ground. Since 2010, the project received hundreds of Brazilian schools with different experiments that were constructed with autonomy, because our site doesn't show some itinerary pre-ready to elaborate the experiments. To collect data for our research, we will use interviews via Skype with the teachers. These data are useful to researches about Science Education area and the Teaching Formation. Teaching professional practice could change and we see modifications in the teachers work, what depends of their realities and context. This project intends to respect the docent autonomy. This autonomy to responsible modifications during continued formation is called "activist formative model" according Langhi & Nardi (*Educação em Astronomia: repensando a formação de professores*. São Paulo: Escrituras Editora, 2012). This project discusses about researches in Astronomy Education - still extreme rare in Brazil, when we compare with other areas in Science Education. We believe that actions like this could motivate the students to learn more Astronomy. Furthermore, this national action can be a rich source of data to investigations about teaching formation and scientific divulgation.

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INTERACTIVE MATERIALS IN THE TEACHING OF ASTRONOMY

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This study presents results of a survey conducted at the Federal Institution of Education, Science and Technology in the North of Minas Gerais (IFNMG), and aimed to investigate the potentialities of the use of interactive materials in the teaching of astronomy. An advanced training course with involved learning activities about basic concepts of astronomy was offered to thirty-two Licenciante students in Physics, Mathematics and Biological Science. The following steps were to be taken: i) analysis of the pedagogical projects (PPC) of the licenciates at the IFNMG, research locus of its Campus Januária; ii) analysis of students' preconceptions about astronomy and digital technologies, identified by the application of an initial questionnaire; iii) preparation of the

course taking into account the students' previous knowledge; iv) application of the education proposal developed under part-time presence modality, using various interactive tools; v) application and analysis of the final questionnaire. The test was conducted with the qualitative and quantitative methodology, combined with a content analysis. The results indicated that in the IFNMG only the licenciante-course in physics includes astronomy content diluted in various subjects of the curriculum; the rates of students prior knowledge in relation to astronomy was low; an evidence of meaningful learning of the concepts related to astronomy, and of viability of resource use involving digital technologies in the Teaching of astronomy, which may contribute to the broadening of methodological options of future teachers and meet their training needs.

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ELEMENTARY SCHOOL TEACHERS' CONCEPTIONS ABOUT THE APPARENT MOVEMENT OF THE SUN AND THE SHADOWS OF THE OBJECTS

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A research about the astronomical conceptions of 65 elementary school teachers, developed at the last module of a continuing education course, in 2012, is described. The module addressed the apparent movement of the Sun in the sky and its relation with the shadows of the objects. Two types of sundials were built and tested. A concrete model was used to simulate the phenomena. A test with five open questions was applied to the participants before and after the activities. Initially, the participants already had notions about the themes treated, because almost all recognized: the existence of variations in the position of the Sun in the sky both throughout the day as well as during the year; the existence of relations between such apparent movements and changes in the shadows of the objects; the possibility of using the shadows of the objects to measure time. However, 53.8% of the participants expressed, at first, the misconception that the Sun passes daily by zenith. And, in general, the responses had incomplete explanations. After the activities, some development