
Darwin in the classroom: replication of historical experiments to assist in the understanding of the evolution theory

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Abstract

The theme of the evolution of living beings and the evolution theory of Charles Robert Darwin (1809-1882) are part of the syllabus of Biology courses of middle schools, in Brazil. The nuclear role of evolution in the organization of biological thinking and contemporary Biology, by one side, and the difficulties to its effective integration in the curriculum, by another, motivated the development of a Teaching Learning Sequence based in the hands on approach of History of Science in teaching. This presentation discuss the results obtained in a research that promoted the elaboration, validation, application and evaluation of a Teaching Learning Sequence centered on the replication of Darwin's experiments about seeds dispersion and consequent plausibility of common ancestry of living beings. The Teaching Learning Sequence had the purpose of facilitate the learning of scientific contents, in the case, the common origin of living beings, by means of explicit discussions about the construction of scientific knowledge. For this, instructional materials were produced and different teaching strategies were used. The empiric study was applied in two classes of 11th grade of a private school, in the city of São Paulo, in the first semester of 2012. Between the results we find, among students, a demystification of the historical character of Darwin, discussions about the nature of science and the evolutionary theory and discussions about the role of experiments as only one of the sources of scientific evidences. The diversity of activities proposed, focused on practical activities, showed play one important role for the apprenticeship.

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