
The origin of electric organs: can that Darwin's special difficulty contribute to the teaching of Evolutionary Biology?

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Abstract

This communication presents a Teaching Learning Sequence (TLS) focusing on Evolutionary Biology to be applied to Brazilian High School students. That modality in the country lasts three years and concentrates on learners generally aged from 15 to 17 years old who have finished elementary school, nine year duration modality .

The implementation, development and evaluation of this sequence is based on the active participation of students in discussions about the idea of the transformation of species focusing on electric fishes as biological material. That theme is part of the author doctoral research. The next stage of this study consists in the application of the TLS to students enrolled in a public school in São Paulo, action already scheduled. The History of Biology "add-on approach" teaching is the central theme of this TLS and addresses the fact that the electric organs of certain types of fish were considered by Charles Darwin (1809-1882) as one of the special difficulties within his theory of natural selection, according of his work *On the origin of species* between 1859 and 1876. Based on the review of excerpts related to the biological evolution from textbooks and Brazilian biology education official archives, it was chosen the strategy of conducting an integrated study of that evolution and, in parallel, articulate explicit discussions about the characteristics of Science and its historical development. The TLS focus of this communication is composed by a variety of instructional materials based on selected excerpts from original sources which are considered the most reliable ones.

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