

Ecological and cheap alternatives to morphological teaching

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The comprehension of the different embryonic phases by many professors of morphology and mainly students is hard, because of the lack of models that represent many ontogeny embryonic intrauterine phases, mainly in mammals, also the study of the ways and structures of the neural system represents serious difficulty to the students of the health area, mainly in the neurophysiologic and neuroanatomic studies. To minimize the difficulties of the anatomical pieces observation, that nor always are available in some colleges and that, when they are, its small size and inadequated preparation hinder a more accurate observation, it was realized the construction of neuroanatomic models directed to the study of the ways and structures of difficult access in the Central and Peripheral Neural System and to embryonic phases of development. To embryology the high cost of the models, that are excellent didactic recourses, makes the access of Brazilians students to them difficult. Other aspect to models construction is avoiding the cadaver use when possible. Therefore, there is a need to development the models with cheap materials. The objective of this work was to make low cost embryonic and morphologic (mainly to neural system) models with recycle materials that fit the recycling standards, and bring ecologic conscientious and generating models that enhance learning and allow a better relationship between student and learning and too, and propitiate the acquisition of knowledge through manual works and to minimize the stressing effects of only reading and observation of expositive classes. The manufacturing process was comprised of homogenization of paper, glue, sawdust and plaster to obtain a consistent mixture with plastic properties to embryonic models and at a reduced cost, the models to neural system had been confectioned with wood cutted with a jig saw, inks for textile, strings and wire. After the confection the pupils present seminars on studied data. Questionnaires were performed to evaluation of learn and the positive results indicate high satisfaction of pupils. The use of models built with recycles in the institution, mainly the public, leads to an environmental protection conscientious to and also allows student to have a intimate relationship with reality of dynamic structure of embryonic process, also showed it is possible to construct embryonic models with recycled material for didactic purposes. The increased three-dimensional models had allowed a better study of microscopical neural areas and its confection by the students facilitated and motivated them in the Neurophysiology discipline study, effecting a bolder form of teaching with the contribution of the students in the teach-learning process, exerting a stiffener effect in the best preparation of the professor for education, beyond contributing to prevent the sacrifice of laboratory animals.

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