

Developing Low-Cost Resources for Teaching and Learning of Astronomy for Students with Visual Impairment at Primary and Lower Secondary Schools

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Abstract

Astronomy is a highly visual subject, thus the teaching of a concept like the solar system is definitely a difficult task for teachers working with students having total visual impairment. In this study, some simple and low-cost teaching and learning resources are developed and presented based on the request from teachers and representatives from the Special Need Education (SEN) Desk. One of the resources is a mnemonic and it can help to establish a relationship between concepts of the solar system and student's personal experience. The other three resources developed in this study focus on tactile learning, and they can be used for teaching and learning in the classroom as well as a formative assessment tool. Some of the resources can be used during classroom teaching as they can help learners with total visual impairment to construct knowledge via two sensory channels (audio and tactile). Furthermore, the technique used to develop some of these resources can further be extended to other science topics like electricity and other subject areas.

Keywords: tactile model, solar system, visual disability