

Evaluation on Academic Achievement and Creativity of A STEAM-based Model of Elementary School Nutrition Education

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ABSTRACT

Nutrition education in the classroom provides substantial advantages to pupil's health outcomes as well as academic performance. This research explores an educational model for nutrient learning using Science, Technology, Engineering, the Arts and Mathematics (STEAM) for guiding student inquiry through visual observation, understanding the nutrients contained in various foods, and making a creative jigsaw through hand-on clay molding activity. Based on the learning objectives in the unit "Magic Nutrient" of the health and physical field in the Grade 1-9 Curriculum, Taiwan, Twenty-six learners of 4th grade were asked to design and make an appropriate USDA MyPlate like dish including various food items from the five major food groups. Learners demonstrated significant improvement on learning achievement and Creativity Assessment Packet (CAP) in pre-post comparison. The results showed that the use of hands-on practice would be helpful in enhancing learning achievement in nutrition education and bringing a more engaging learning experience. Further, this course had potential in developing independent thinking logic and stereoscopic space concepts.

Keywords: clay molding, creativity, learning achievement, nutrition education; STEAM