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OP 017

New Products Of Toxiclaro: Toxland Adventure to Enhance Children's Understanding of Household Chemicals and Their Adverse Effects

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Abstract

Worldwide, harmful chemicals and pesticides continue to be the greatest threat to young children whose bodies and brains are still developing and therefore most vulnerable. It is imperative therefore to educate young children on chemical safety and lay a foundation for them to be knowledgeable on the risk of harmful chemicals and consequences to its exposure. In 2009, Universiti Sains Malaysia (USM) in a collaborative effort with the United Nations Environment Programme (UNEP), World Health Organization (WHO) and the International Union for Pure and Applied Chemistry (IUPAC) developed a teaching course on chemical safety called Toxicology in the Classroom (Toxiclaro).The courseware has been pilot-tested and distributed in several countries with encouraging result. Studies on poisoning cases in Malaysia (2006 – 2012) reported to the National Poison Centre showed that household poisoning represented the second largest incident of poisoning involving children.A significant number of the reported cases were accidental in nature (94.7%) and occurred at home (98.5%). This is evident that Malaysian children need to be further educated on the dangers of household chemicals and how they can avert poisoning caused by unnecessary exposure. Toxiclaro is continuously exploring new educational products for children's learning. This paper presents a new Toxiclaro product called Toxland Adventure developed based on children's Multiple Intelligences. It is in the form of edutainment games designed to stimulate and heighten children's understanding of household chemicals, its associated dangers, poisoning risks and prevention strategies. Toxland Adventure comprises a number of specially designed games and stories such as Fix the Facts, Hop & Help, Acid Base, Read the Label, KamishibaiStory telling and My Lovely Home. We used the Visualization in Participatory Program (ViPP) training method to aid memory and concept understanding. The products have been pilot-tested on the public involving children aged 6-14 years-old at the Science Engagement Workshop inthe Kuala Lumpur Science Discovery Centre. Using the ViPP evaluation tools, participants were assessed before and after each session. Results showed that the majority were satisfied and pleased with the games. Toxland is not

limited for use in Malaysia only but available to other countries interested in this educational tool.