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13TH INDES 2024
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THE 13TH INTERNATIONAL INNOVATION, INVENTION & DESIGN COMPETITION 2024

EXTENDED ABSTRACTS

e-BOOK

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THE 13th INTERNATIONAL
INNOVATION, INVENTION &
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MODULAR DESIGN CONCEPT IN AN URBAN AGRICULTURE PRODUCT FOR PRIMARY SCHOOL STUDENTS: VEGO

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ABSTRACT

In Malaysia, hydroponics is considered as a type of urban agriculture. The exposure and awareness of this type of agriculture is still low among primary school students. The objective of this innovation is to develop an agricultural product to give awareness on healthy eating habits. VEGO is inspired by Lego. Lego was chosen as children love Lego. This product does not use any smart technology so the children can use it easily as the product target user is children. VEGO is made to focus more on helping people, especially children, to have healthy eating habits in school.


Keyword: easy, modular, school children

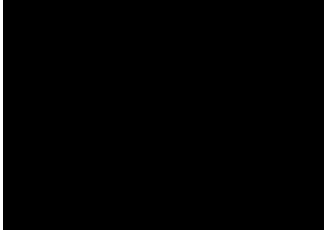
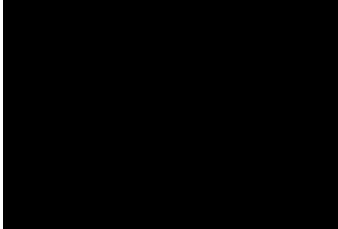
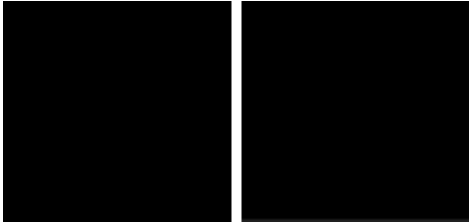

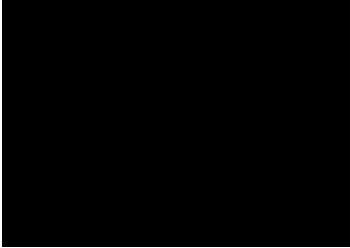

1. INTRODUCTION

Urban agriculture is the practice of cultivating, developing, and producing food and other agricultural products in an urban or metropolitan area. It entails growing food in areas that are generally related to cities, like rooftops, open spaces, community gardens, and inside spaces like greenhouses and vertical farms. It is our responsibility to create a sustainable product based on concerns that are relevant to Malaysia trends. In Malaysia, many people are not aware of healthy eating habits so, VEGO has been designed to promote healthy eating habits to primary school students. The teachers will teach the students to live a healthy lifestyle by planting their own food.

2. METHODOLOGY

The details of the design process for the product are as follows.

Phase	Description	Result and images
Research	<ul style="list-style-type: none"> - Look for the design to use. - Study 3 agriculture systems. - Site visit and create questions in google form. 	

<p>Sketches</p>	<ul style="list-style-type: none"> - Ideation - Sketch a 2D/3D design to move to the next stage. - Idea Development - Sketch a 3D design - Design Development - Develop more designs to continue to the final design 	<p>Ideation</p>  <p>Idea Development</p>  <p>Design Development</p> 
<p>Mock-up</p>	<p>- Create a mock-up final design using a PVC board</p>	
<p>Usability test</p>	<ul style="list-style-type: none"> - Improve by using the answers from Google Form questions and opinions on the mock-up. - Make notes in a usability test table to analyze opinions on the mock-up. 	
<p>Final Product</p>	<p>- Create the prototype of the product.</p>	

3. FINDINGS

VEGO is made portable for children. It is also in bright colours such as yellow, red and blue. Several materials are used to create the product such as PLA material for 3D printing, plywood and acrylic for laser purposes, rubber and 3 primary spray paint colours.



Figure 1 VEGO

4. CONCLUSION

To sum up, VEGO is going to help many people to have a healthy lifestyle in the future.

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Sekian, terima kasih.

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Saya yang menjalankan amanah,

SITI BASRIYAH SHAIK BAHARUDIN
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