Proposal 1 – Pixelaction

Introduction

Pixelaction is an array of lights that can be arranged to display any form of symbol. The array is made of individual translucent nodes. When a light source is shone on one pixel, it will emit light due the light sensor. These nodes will trigger a ripple effect/chain reaction where the first node is manually activated with a light source eg. Torchlight, causing it to emit light. The adjacent nodes will detect the light emitted by the previous node and continue the chain till the last node.

What is it made of

Each node is made using translucent/transparent recycled materials like plastic bottles, glass containers, scrap 3D printing materials, etc. Each node has LED's and photodetectors to ensure its functionality.

Design Innovation & Link to sustainability

Pixelaction is an environment friendly project due to the use of recycled/reused items used to make up the light emitting nodes. The option of utilizing 3D printers to fabricate customized nodes open the option for them to be sold as souvenirs. Non-recyclable materials can be repurposed and utilized to created more nodes (better design options). These reuses materials/objects that would be otherwise thrown away, decreasing the amount of waste in Singapore. These nodes are activated by light. Hence promoting the usage of solar power, a renewable energy source. The symbols that can be made using Pixelaction include environmentally motivating/encouraging symbols as well as to form phrases to promote environmentally friendly values.

Proposal 2 - Melting Iceberg

Introduction

Melting Iceberg is an iceberg model that emits light with varying intensity, depending on the number of people near it. The lesser the people nearby, the brighter it emits its light. When 4 – 5 people come within a meter of it, its intensity drastically reduces. After a few seconds in low light mode, a display on the iceberg would display a message reading 'take a step back, save the earth'.

What is it made of

The iceberg is an acrylic model with LED's placed inside it. Proximity sensors are placed around it to allow the iceberg to determine how close people get.

Design Innovation

The melting iceberg was designed to function in this way to promote social interaction. This is achieved when a few people get close and the lights dims out. This would be contrary to what people would expect when approaching this installation, hence it increases the chances that they would talk about it.

Link to Sustainability

The idea of this project is to raise awareness of the effect of global warming on the polar ice caps. This is portrayed through the presence of too many people surrounding the iceberg and heating it up. The display reminds us to take a step back from technological advancement and consider the effects on nature and earth, our home.

Proposal 3 - Melted Iceberg 2.0

Introduction

Melting iceberg 2.0 bears a similar concept towards Melting Iceberg (1) except its design and actuation is different. Instead of an individual acrylic model, the Melting iceberg is made up of multiple translucent tubes with LED strips inside it. These tubes will be installed upright on a platform and arranged to form the shape of an iceberg. When people get close to it, the platform lowers itself signifying that the iceberg is melting. The tubes around it will rise signifying the ocean levels rising. A display will read 'take a step back, save the earth' This effect reverses when people step away.

Proposal 4 - HEAL

Introduction

HEAL is an instalment that work in the reverse concept of Melting Iceberg and Melting Iceberg 2.0. HEAL is a globe that lights up and will get brighter as more people get closer to it. There are proximity sensors placed around it to detect the number of people and how close they are to the globe.

What is it made of

The globe is made of acrylic with outlines of the continents of earth. Each continent is lit with an assorted colour of LED's. As people get closer, these LED's get brighter.

Design Innovation & Link to sustainability

HEAL displays the concept of togetherness in making the earth a better place for everyone. It also portrays that sustaining our home, Earth is the responsibility of all humans. The interaction among of people circling around the globe to make it bright relays the message that everyone, strangers or friends, plays a part to make Earth a wonderful place.

Proposal 5 – Carbon Footprint

Introduction

Carbon Footprint is a segmented platform for people to walk on. Pressure sensors and LED's are placed under these segments. As people walk on each segment, they light up and stay lit for a few seconds and then dim out.

What it is made of

The platforms are made of translucent/coloured translucent material and pressure sensors. LED's are also placed underneath them.

Design Innovation & link to sustainability

The platform symbolises the carbon footprint left by people as grow and develop in their life. This encourages people to ponder over the effects of their carbon footprints on the earth and also remember how important it is to keep our Earth a better place for the future generations.