ABSTRACT
A 5D installation examining the bridge between virtual environments and human sensation present in the physical world. The purpose of this research and product production is to analyze how the human sensations of sight, smell, touch, and sound respond to stimuli produced by artificial means. In the world of virtual reality, 2018 is a big step from 1838’s stereoscopic images and 1849’s lenticular stereoscope. While we now have marvels such as the Oculus Rift, the common thread found in each of these is the level of interactivity and engagement of the user. In an age where information can be found in seconds and experiences are captured through small handheld boxes, there lies a window of opportunity to combine sensory elements with the virtual world. Capsule aims to create these experiences in mounted capsules that users stick their faces into accompanied by an Oculus Rift device. With the production of a capsule or “viewfinder” we aim to test the hypothesis that, by carefully tending to each of the four sensations, users can be virtually transported to different environments where their primitive instincts/sensations are heightened.

METHOD
• Basic & Applied Research, focused on the history and applicability of virtual and augmented reality, as well as an investigation about the effects of outside stimulus on the brain and cognitive awareness
• Qualitative Research, focused on human behavioral reactions to stimuli such as visual, smell, auditory & tactility
• Prototype generation with a keen focus on user usability
• Product testing and analysis
• Analytical design iterations incorporating data from tested prototypes

MATERIALS USED
• Duct Tape Reinforced Cardboard box
• Tripod
• Iphone Display

PROTOTYPE I
Users were subjected to place their faces in a box that was equipped with an iphone playing an interactive 360 video

ANALYSIS
Users experienced a high level of engagement, however without a handle, users were quick to place their hands on the capsule (box) and move it around once prompted they could do so. Out of the seven users, all showed similar motion patterns which ranged from left to right as well as the want to move the capsule up and down

PROTOTYPE II
Users were subjected to place their faces in a reinforced box equipped with Google cardboard as well as a steering handle, over ear headphones, a new tripod for true 360 degree motion, foam ribbing for facial comfort, and a plastic terrarium filled with shrubbery, leaves and other organic material to enforce smell

ANALYSIS
Users naturally took to the new editions however the average experience time was less than one minute. After analysis, I concluded that the missing piece was engaging audio. Users were looking for dynamic sounds that told a story and kept them engaged

IMPACT & FUTURE WORK
Prototype I & II proved my hypothesis that by carefully tending to each of the four sensations, users can be virtually transported to different environments where their primitive instincts/sensations are heightened. Moving forward our work will include the production of an acrylic terrarium for humidity and air temperature as well as creating a dynamic soundtrack to spur actions such as smelling objects and utilizing the capsules 360 degrees range of motion

Prototype I
User Size: 7
Average Exp Time: 1.5-2 min
Range of Motion: 180°

Prototype II
User Size: 12
Average Exp Time: 1 min
Range of Motion: 360°