

ALL BRAIN



מכון
דוידסון
הרווח החינוכי
על שם
דודסון

גן
המדע
ע"ש חילור
Clare Garden
of Science
حديقة العلوم
على اسم حاور

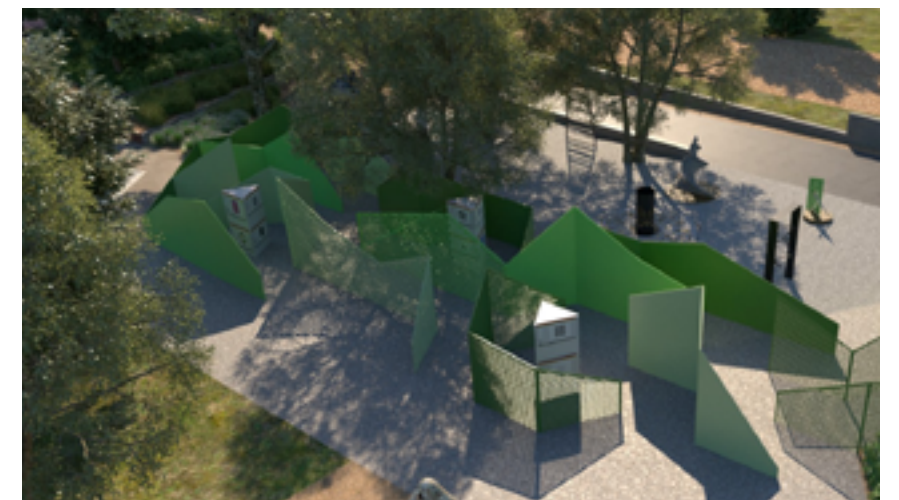
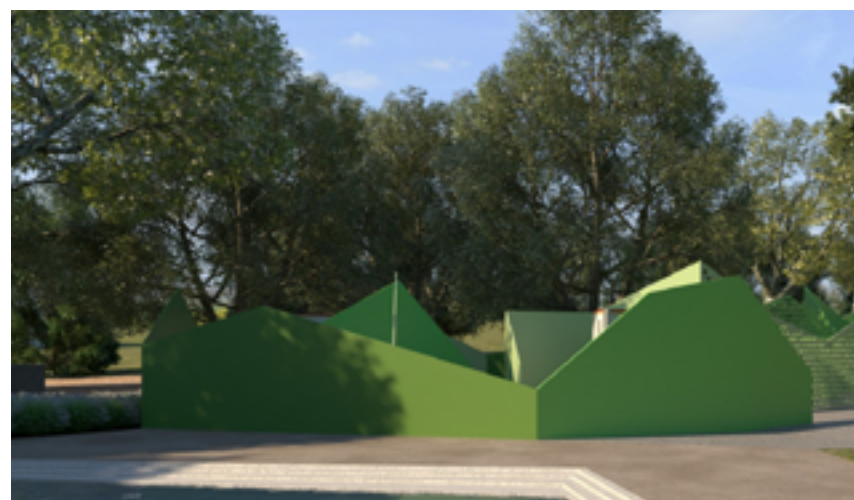
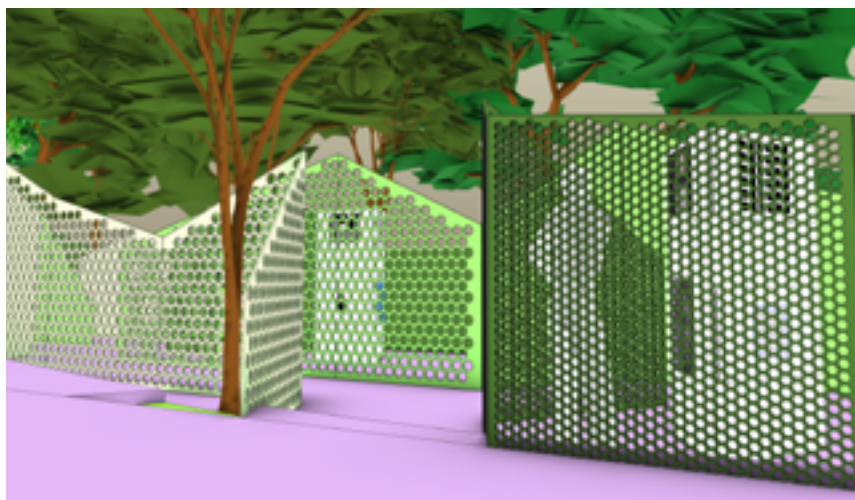
OVERVIEW



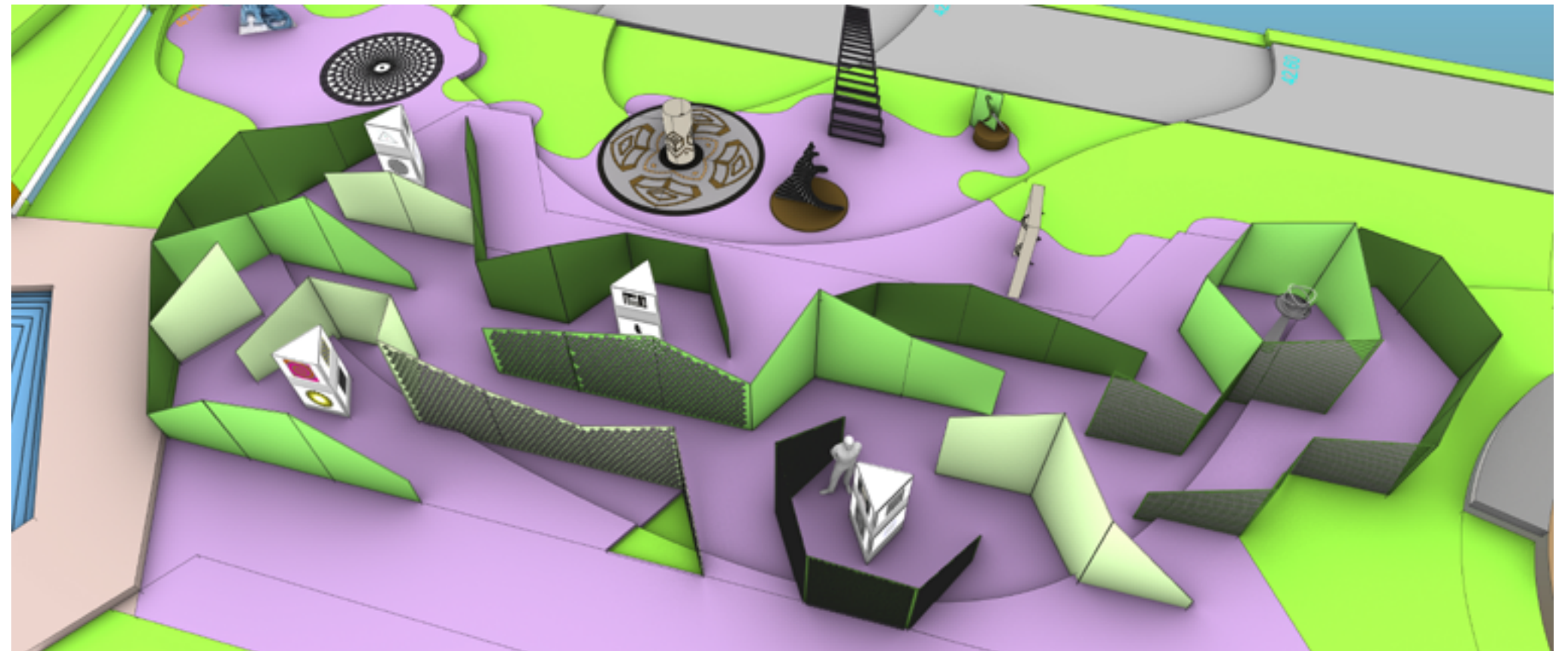
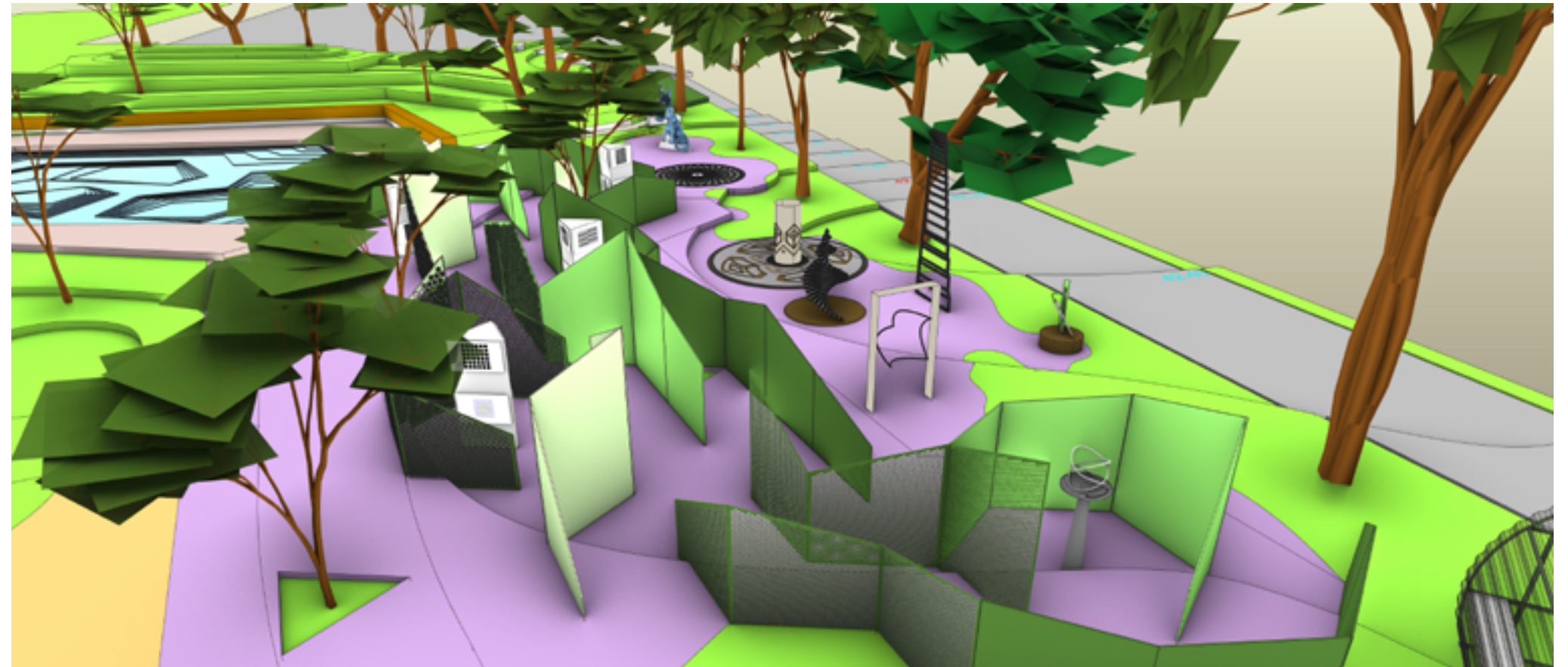
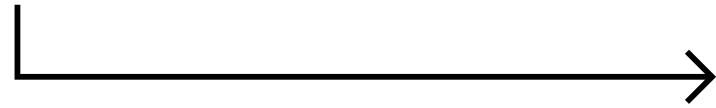
All Brain is all about how our brain interprets reality. It is about how it deciphers the information that is constantly supplied to it by the nervous system, including its many shortcuts and misinterpretations. It is about math and morphology.

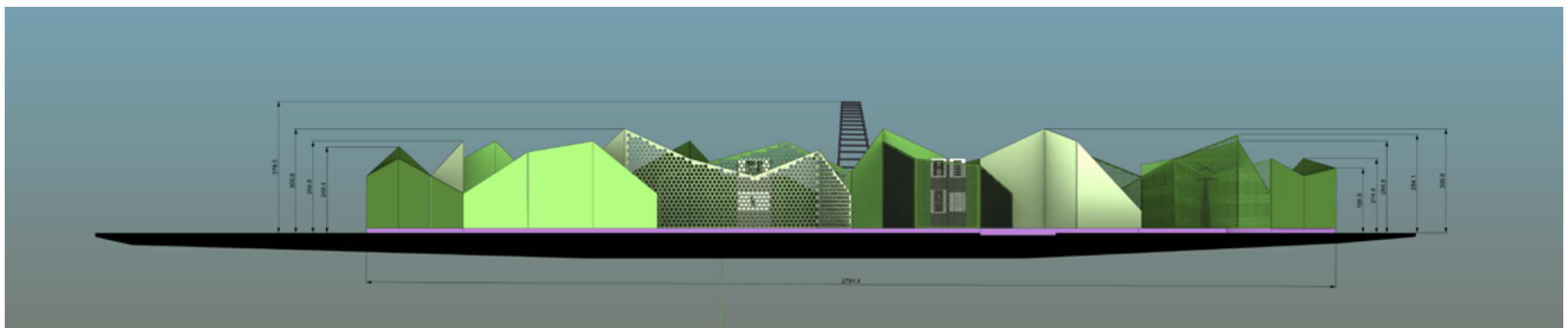
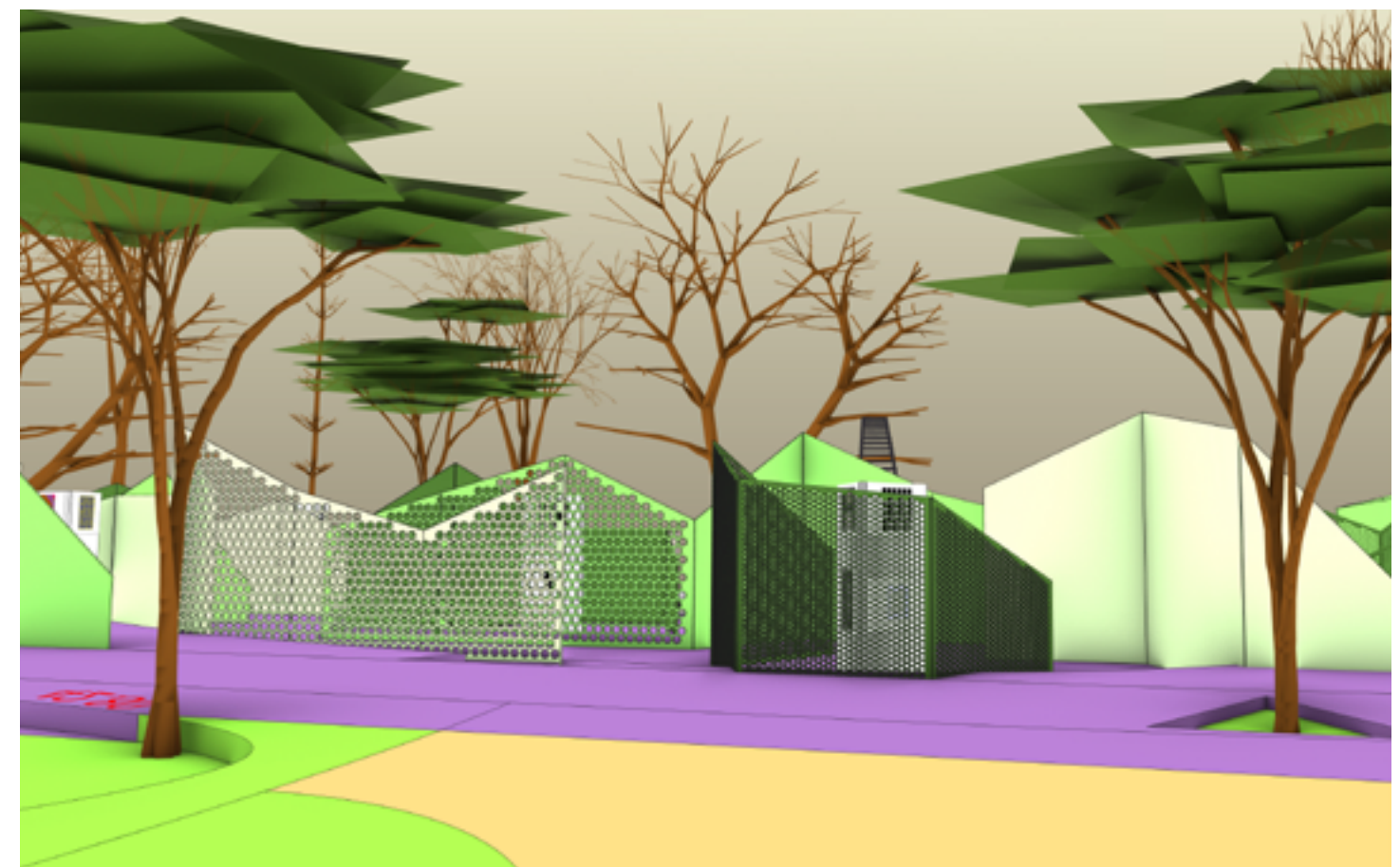
The gallery is divided into three main parts:

1. A membrane that serves as the medium between the Garden and the closed area of the gallery, within which optical illusions and similar exhibits are displayed.
2. A space that is tessellation with an unusual, inspiring, mathematical tessellation along with 5 math exhibits.
3. A Zen Garden



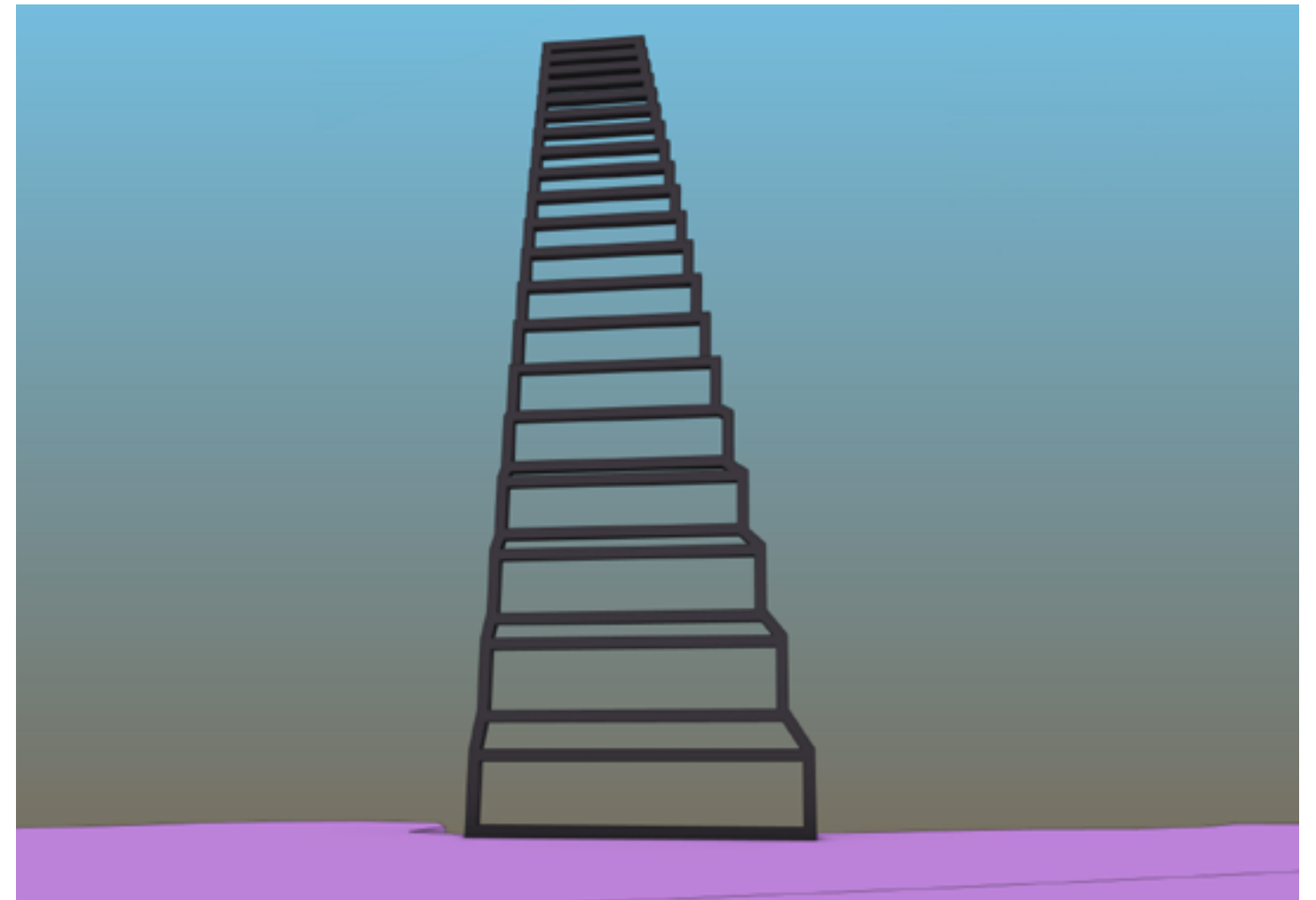
TECHNICAL DRAWINGS





Stairs to Infinity

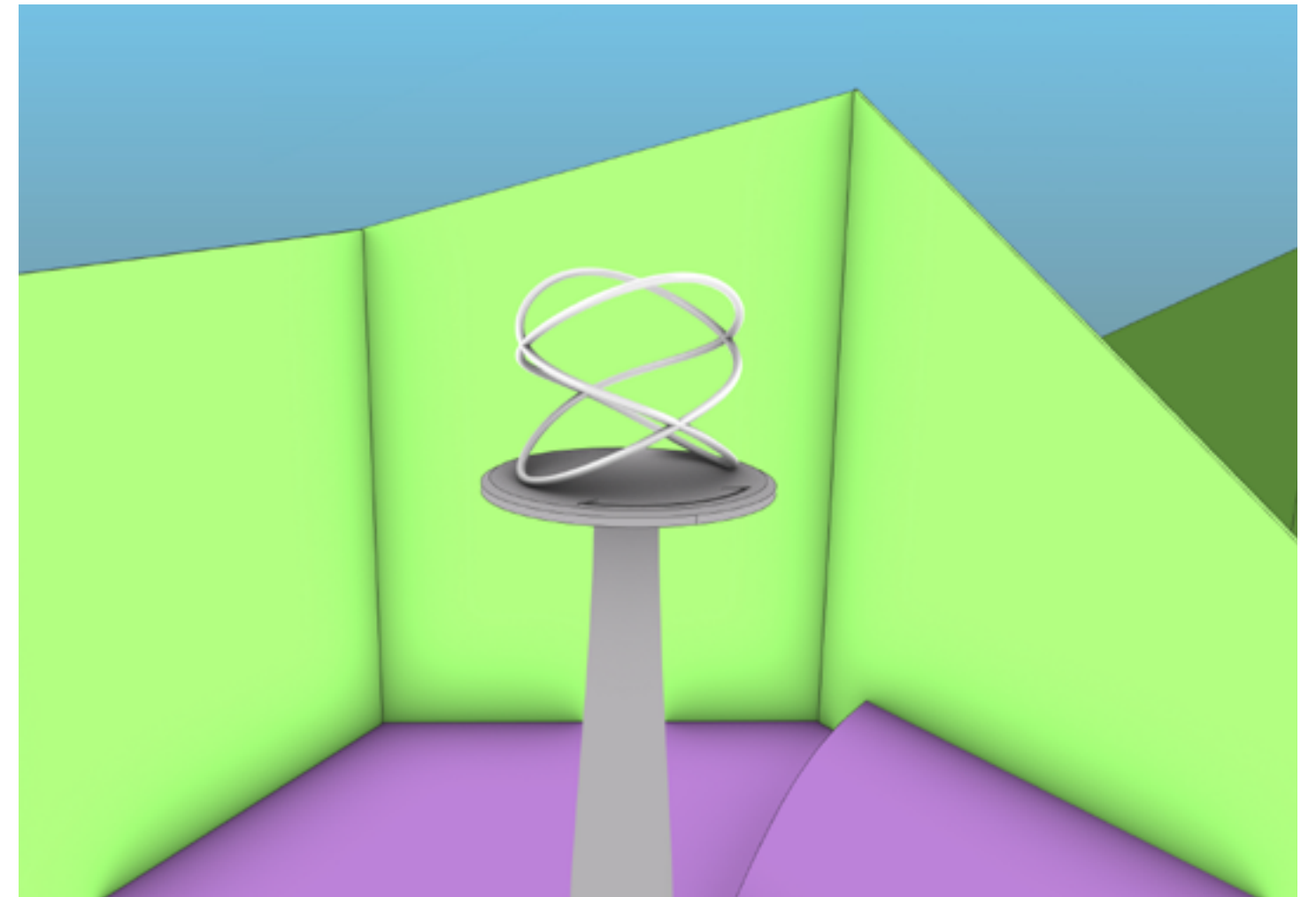
- The stairs to infinity are made of stairs whose width slowly decreases with height, giving the illusion of convergence at infinity. Visitors can examine their perception of the illusion while pondering the concept of infinity.



Lissajous Curve

→ The Lissajou curve is a sculpture made by bending a metal rod along a path that a point in space follows when the rectangular (x,y, and z) components of the point's position have a sinusoidal motion, given by parametric equations. The ratio of the frequencies is rational to ensure the rod closes on itself.

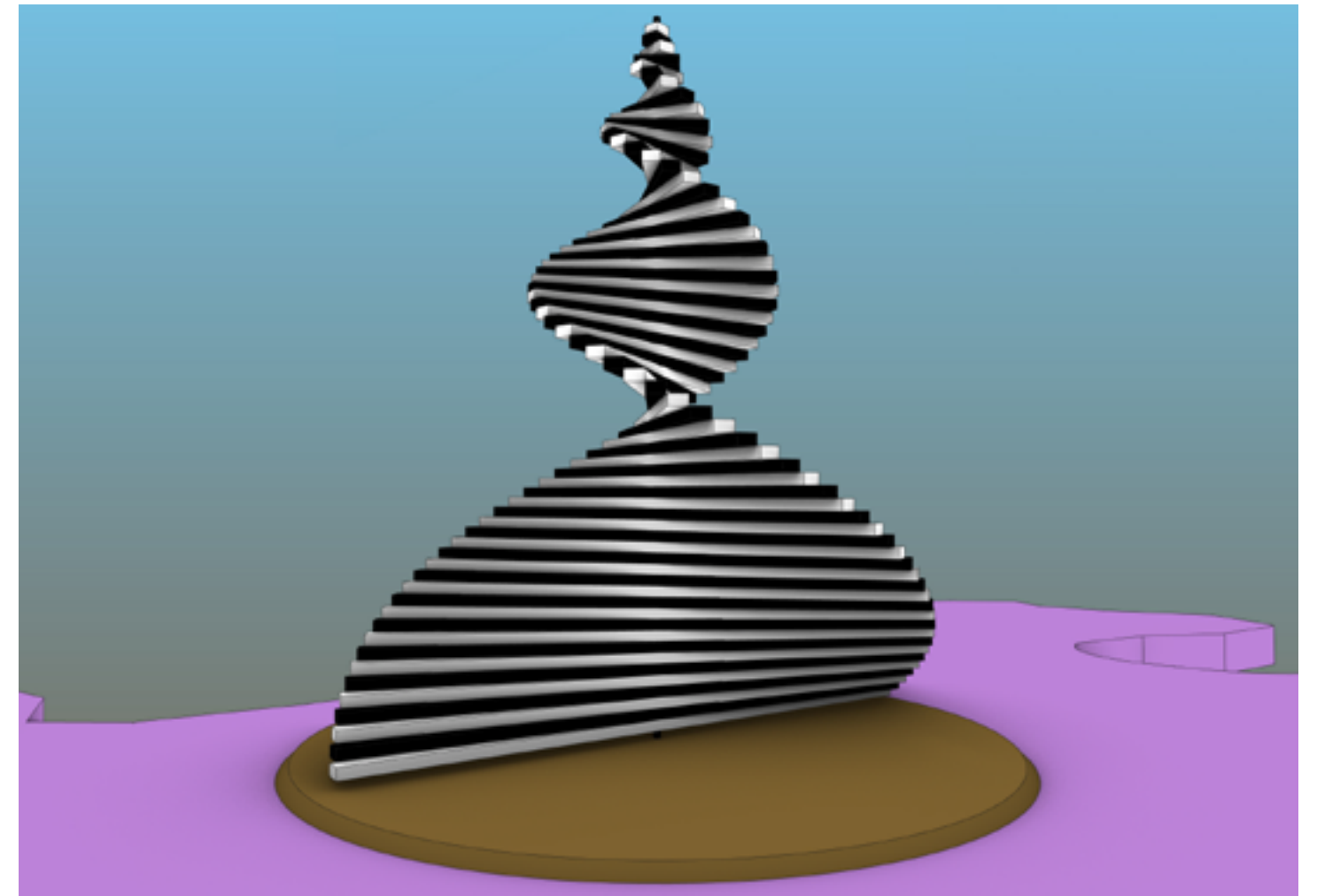
Apart from admiring this beautiful, geometrical object, visitors will also be able to construct physical and virtual Lissajou curves in the Make Science and Media Labs.



Spiral Structure

→ The Spiral structure is a piece of artwork made by piling alternating black and white beams that can be rotated by the visitors to create spirals and other interesting shapes.

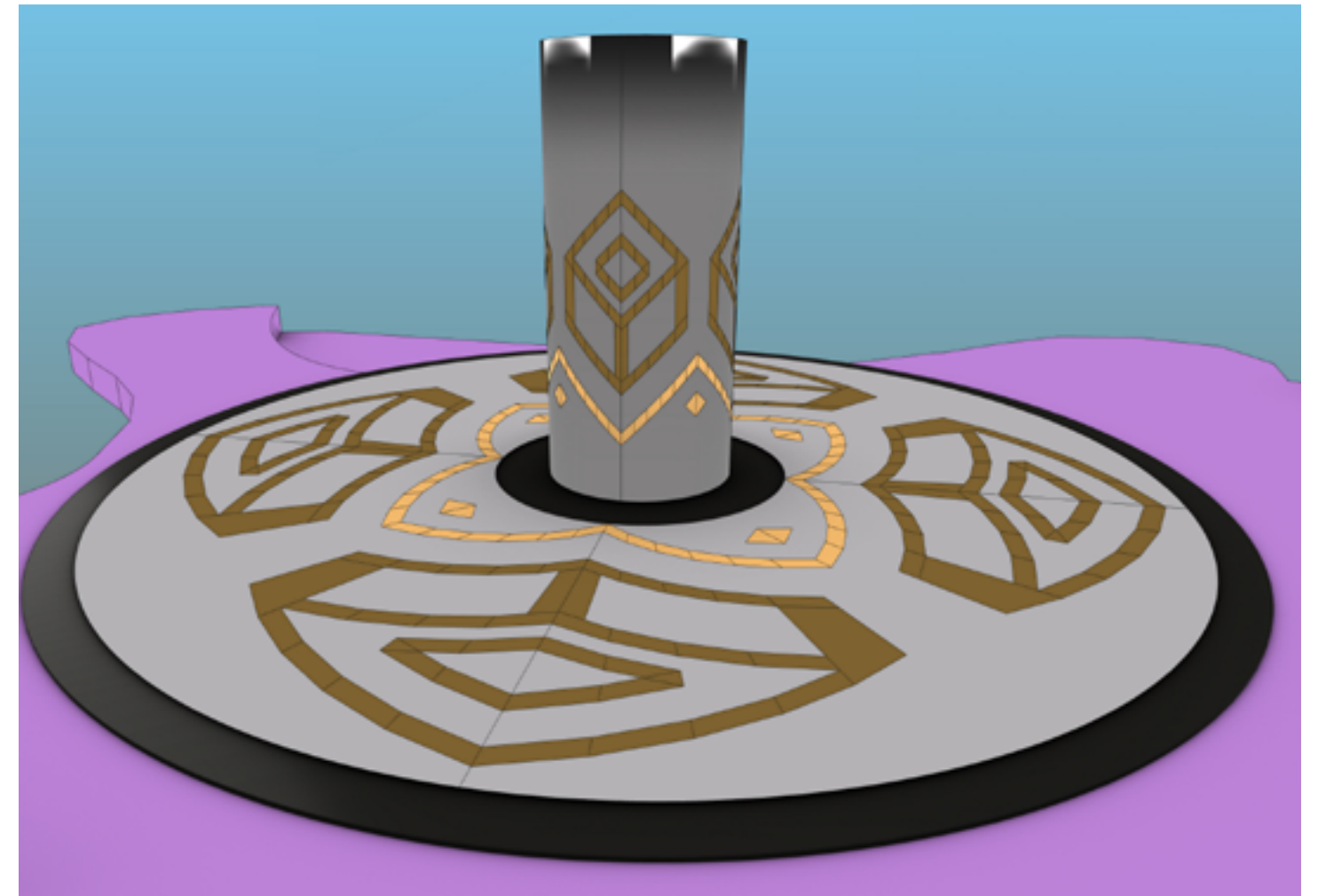
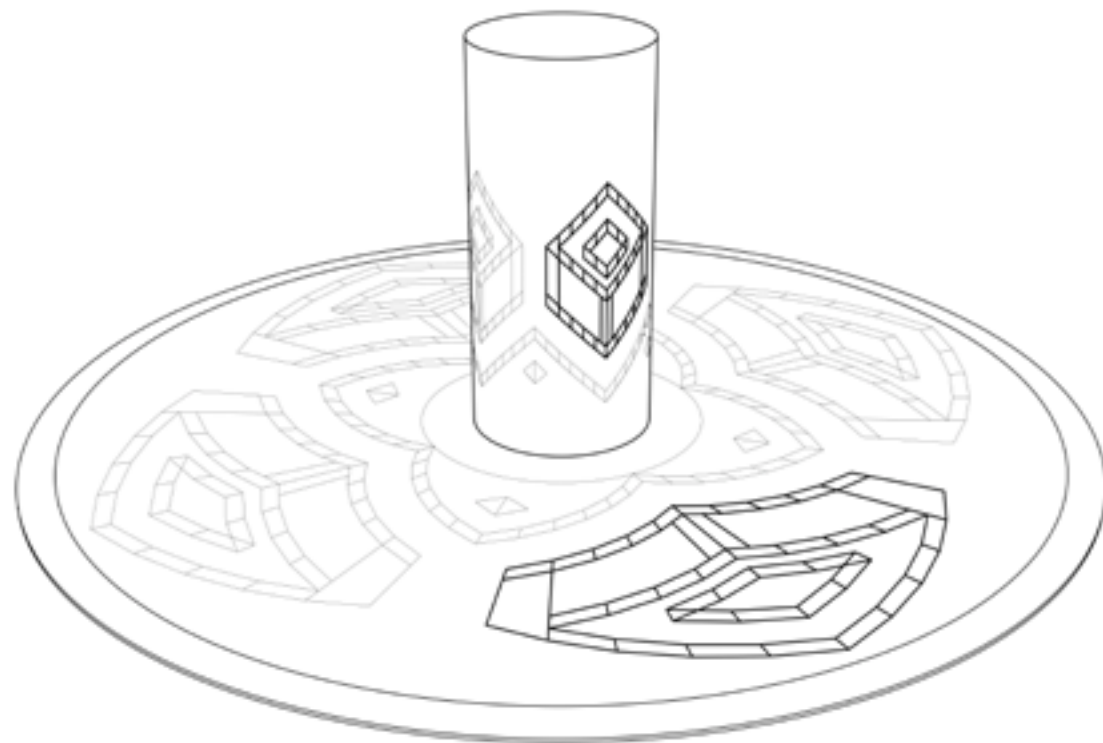
The structure is mounted permanently on a circular disc.



Anamorphosis

→ The Anamorphosis exhibit examines the concept of mapping and projection on circular and cylindrical grids. A cylindrical column made of stainless steel mirrors distorts images on the circular plane, so they are displayed correctly on the column.

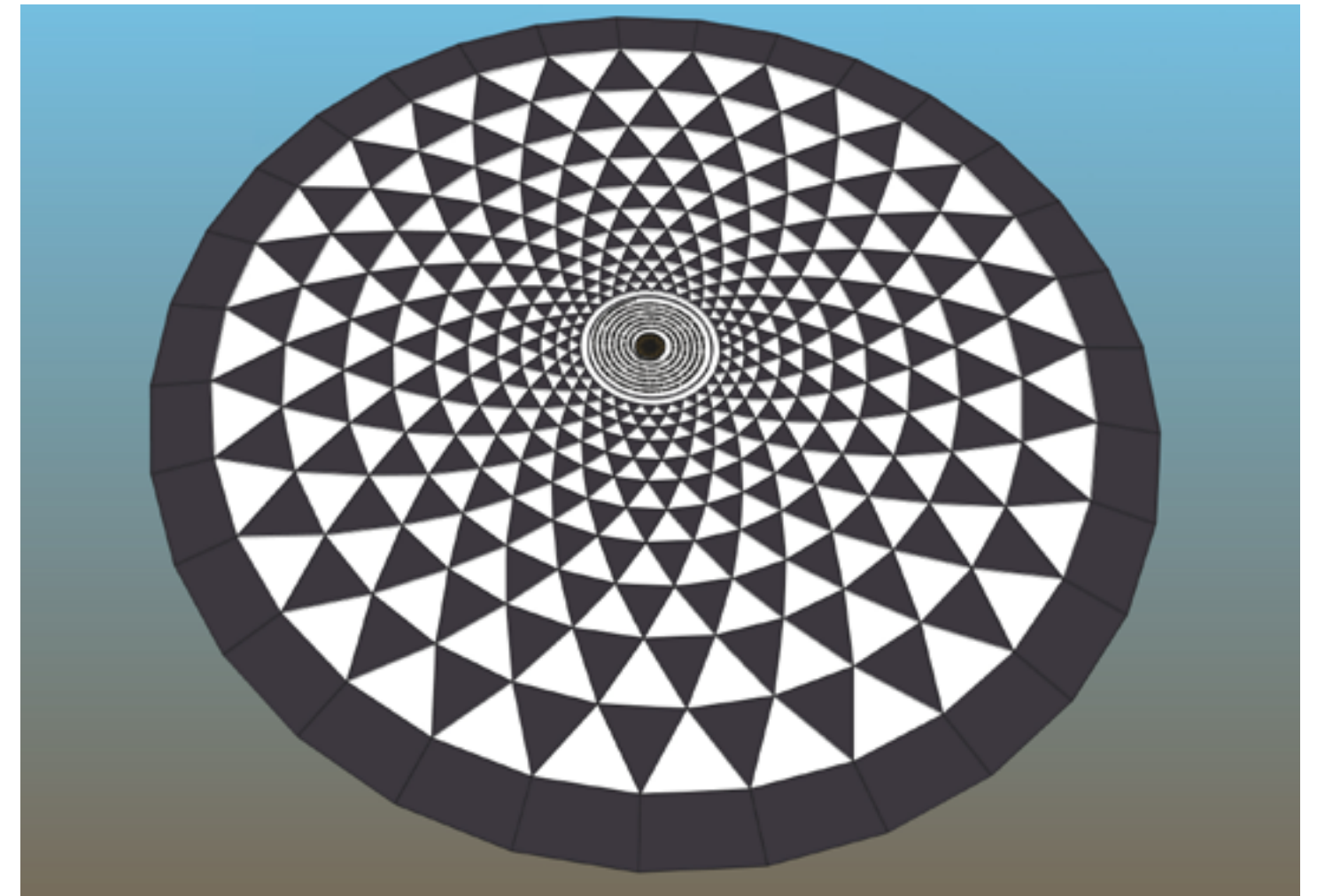
Visitors can experiment with their own artwork by placing it on the circular base and see how it is mapped onto the mirror.



Aperiodic, Radial Tessellation

→ The Aperiodic radial tessellation is a triangular tiling system that approaches infinity towards the center. A spiral made up of the digits of pi (3.1415) culminates at a conal hole in the ground, along whose walls the digits continue to spiral in.

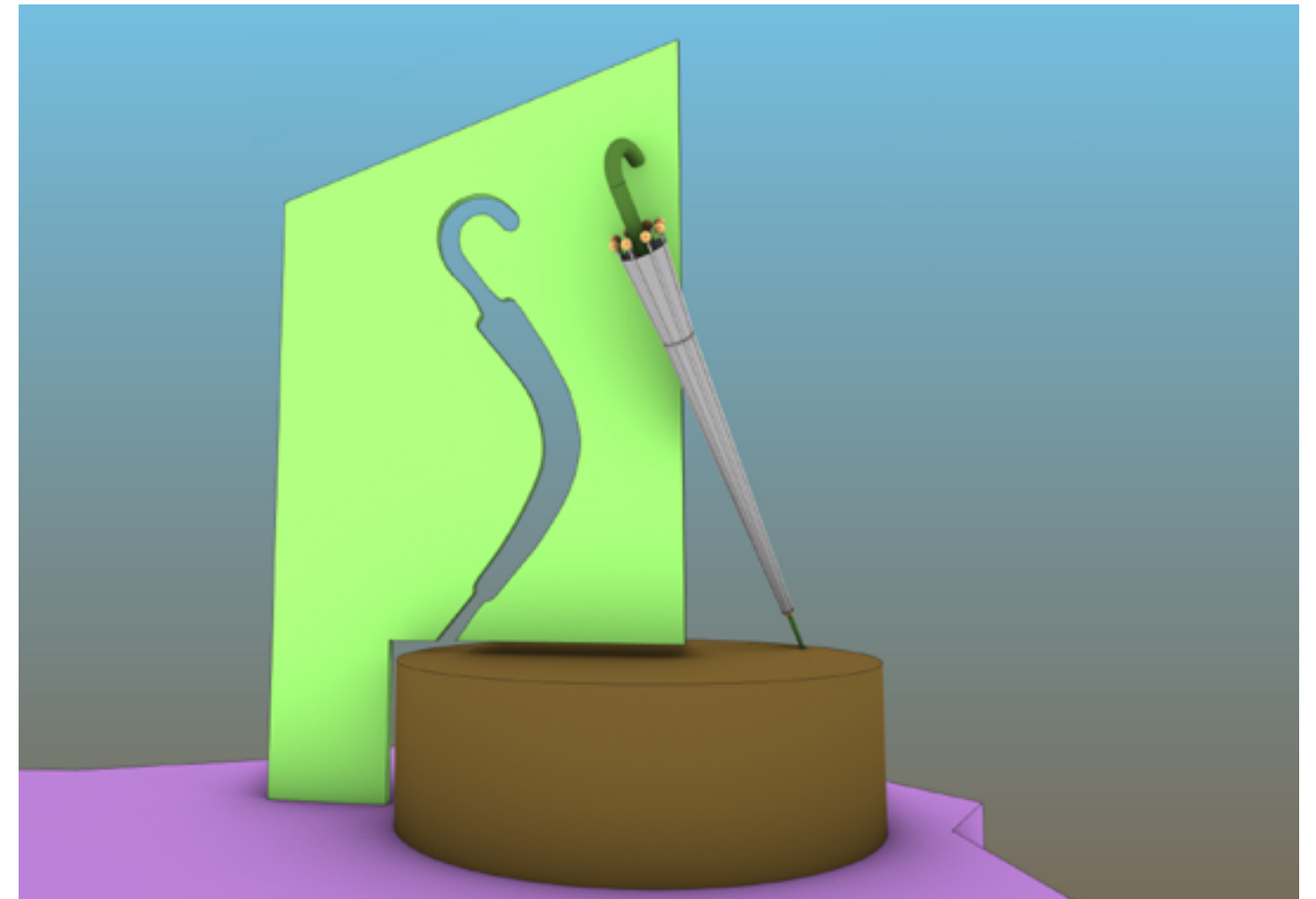
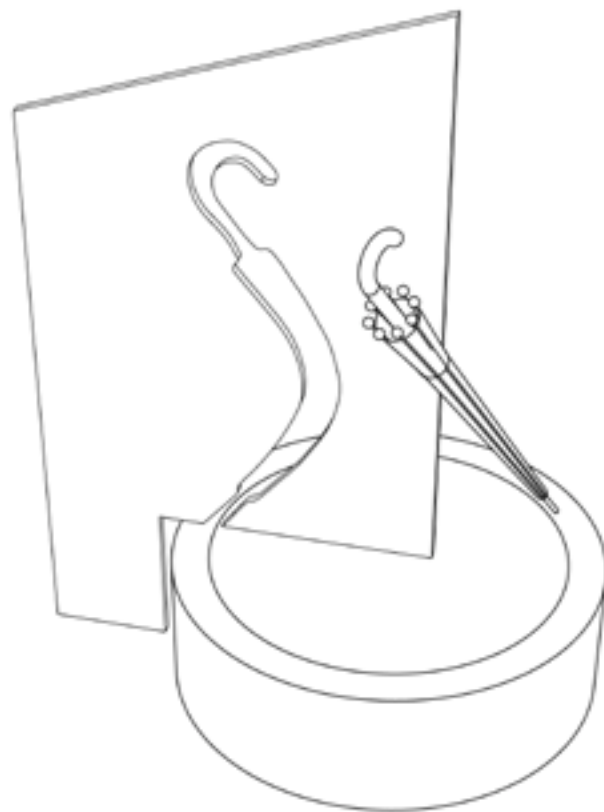
Visitors can walk on the tiling, which is also a vivid illusion in its own right, while examining the concepts of proportion, circles and spirals, infinity and zero.



Hyperbolic Umbrella

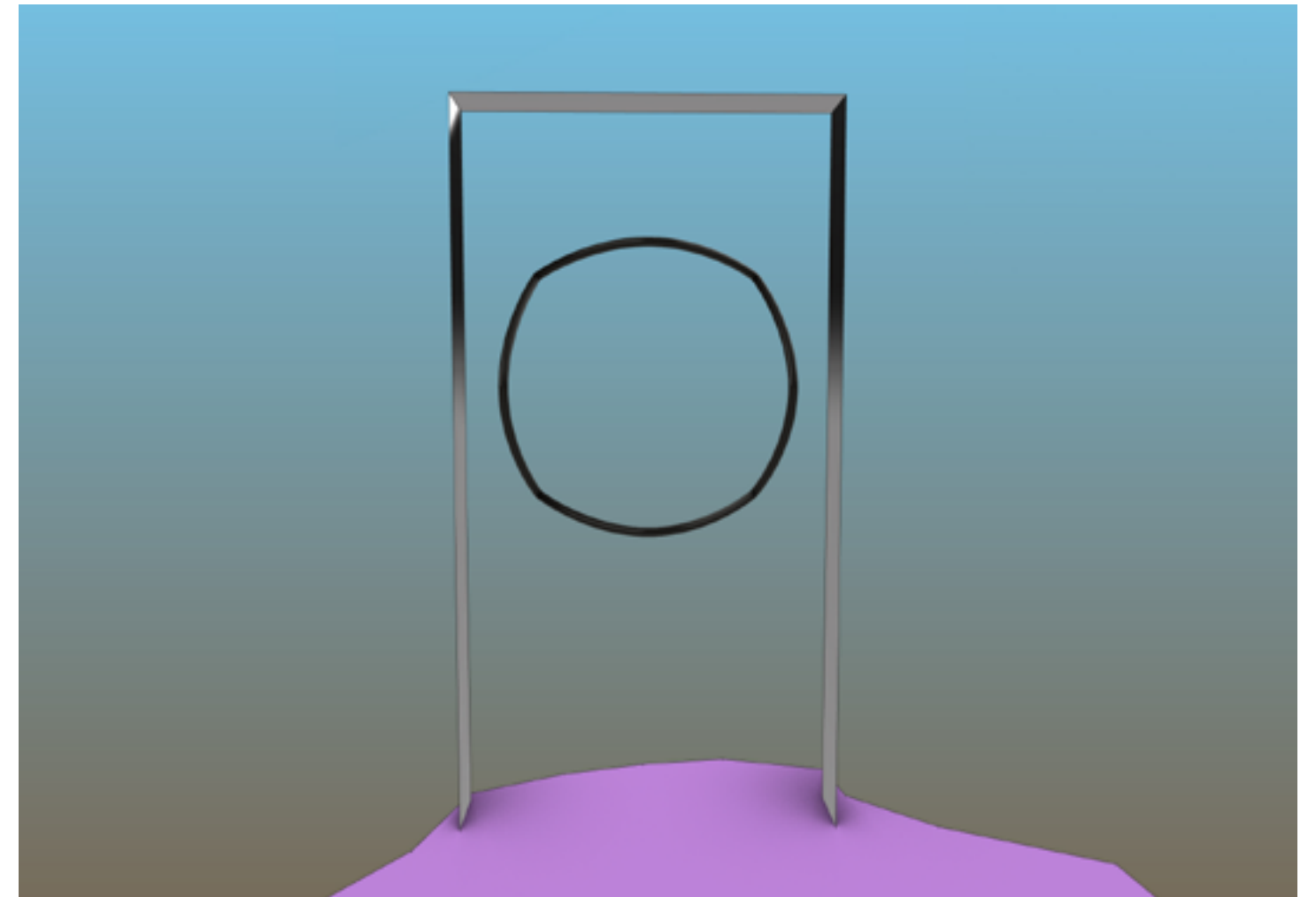
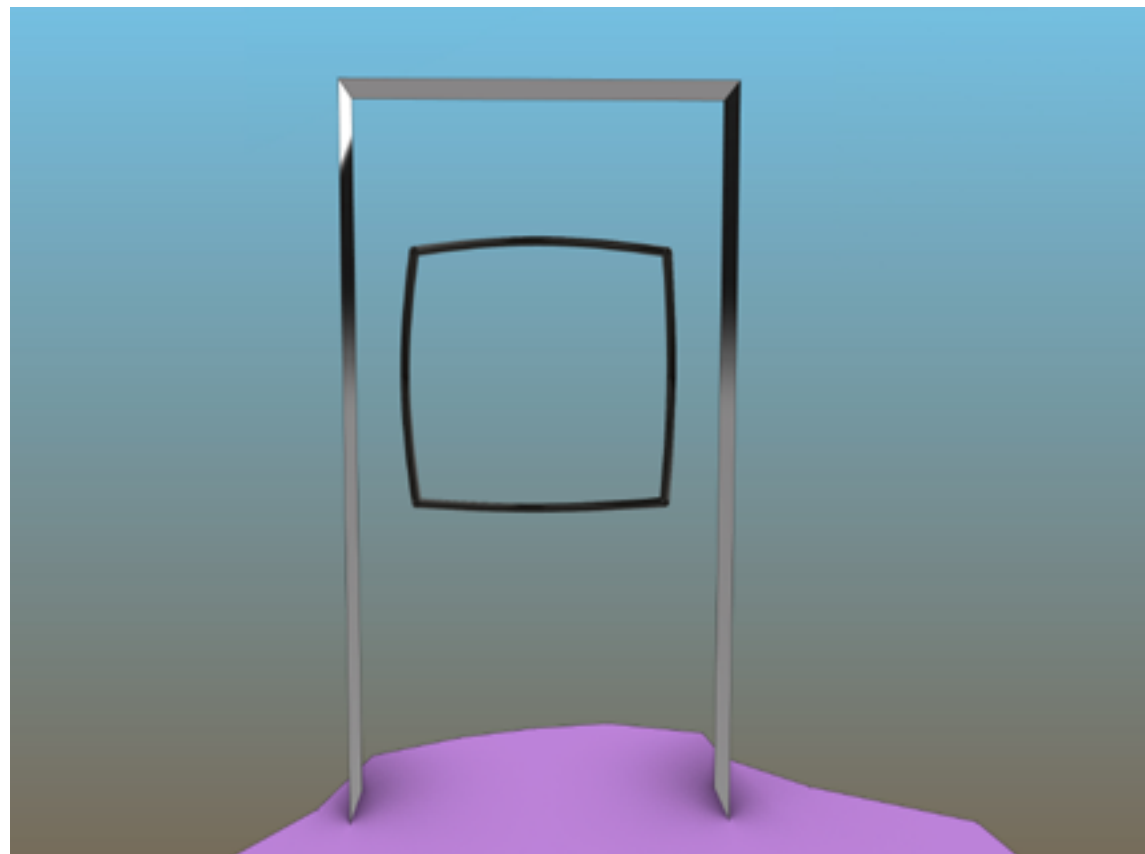
→ The hyperbolic umbrella illusion features a straight statue in the form of an umbrella, mounted at an angle of 45° on a rotating, solid cylinder.

Perpendicular to the cylinder is a board with a hyperbolic cut in it, in the shape of the umbrella, through which the statue smoothly passes when the cylinder is rotated.



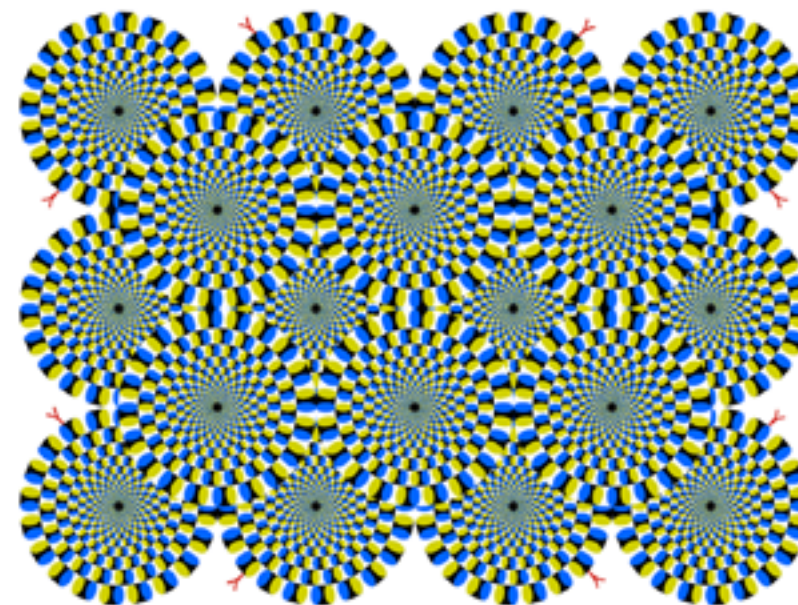
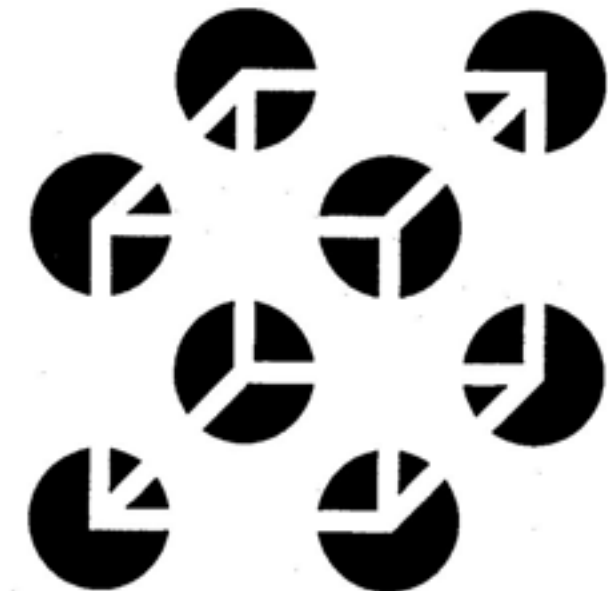
Form Illusion

- The form illusion, a metal, three-dimensional shape hung from a supporting frame, appears to be a round shape when viewed directly (head-on) from one side, yet appears as a square when viewed from the other side.

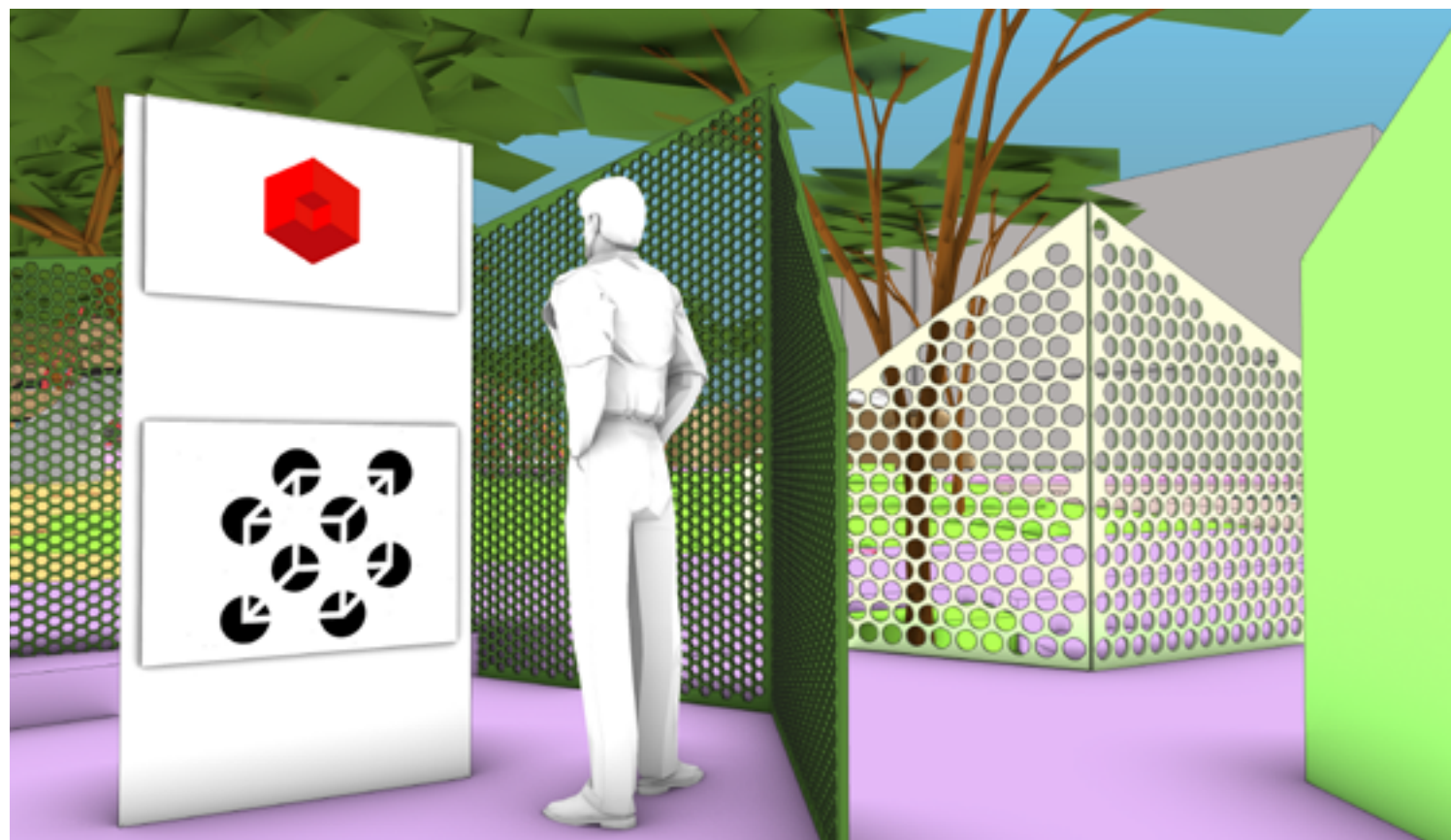


OPTICAL ILLUSIONS EXHIBITS

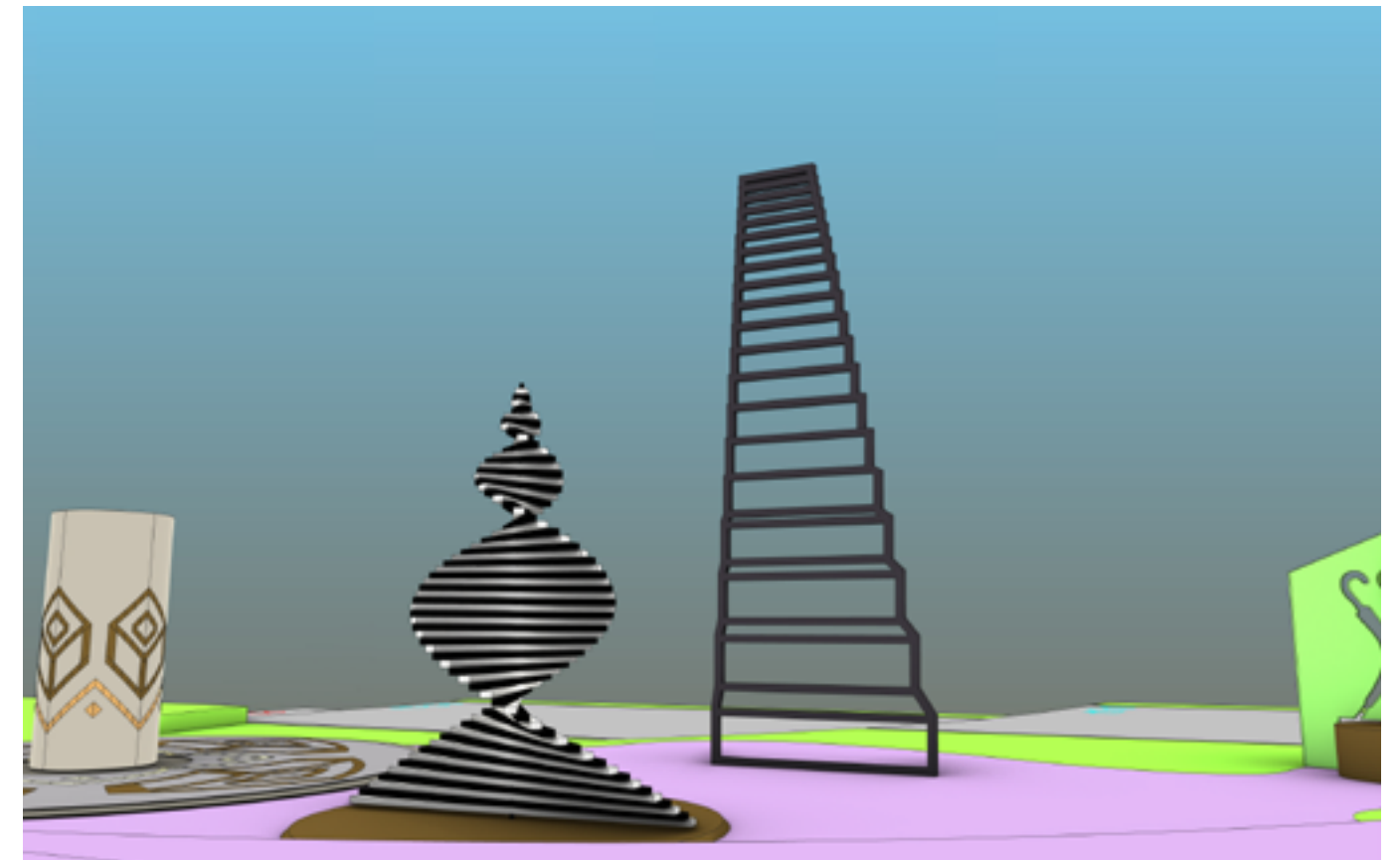
Optical illusions are vinyl printed on boards erected within the membrane, two to three illusions on each board, according to the specific genre. When staring at each illusion, visitors experience "strange phenomena" such as scintillations, color enhancement and movement.



TECHNICAL DRAWINGS



Visitor View



Exhibits Speard

Singing Zen Bowls

- The exhibit contains four large Tibetan bowls (running water / a small pond) filled with water.
A musical note is generated when the users place their hands inside each bowl; moving the hand will manipulate the sound. Activating more than one bowl will create a chord.

The centerpiece contains a screen displaying generated cymatic shapes based on the musical notes.

