Resonance Pavilion

Rediscover Nature.
Reconnect in the City.

We trun the wind, sunlight and movement into an visualable art interaction experience.

A spape to slow dowm, connect with people and feel tnature in rush urban life.

CONCEPT

In modern cities, people are constantly surrounded by movement, information, and noise, causing many natural phenomena.such as wind, sunlight, and the movement of leaves sound are unnoticed.

we reimagine the Muziekkoepel in Oosterpark as a place where visitors can slow down, relax, and reconnect with nature. At the centre of the pavilion, coloured glass wind chimes transform sunlight and wind into visible movement, reflections, and sound. During evening, the people can light up and see the glass reflection with touch sensor.

This shared sensory experience not only enhances enjoyment and participation but also encourages people to pause, connect, and engage with one another. Ultimately, we hope to create a pavilion that combines natural awareness, interactive participation, and social connection, using technology to help people rediscover the often ignore relationships between nature, people in urban environment.

Maquette

Our team chose the pavilion in Oosterpark as the foundation of the project because we felt that its architectural form functions not only as a place for rest and gathering, but also as a focal point that naturally draws people's attention.
Rather than presenting our concept solely through a two-dimensional video, we wanted to create a physical model that could better communicate the spatial experience and atmosphere of the installation.

MULTI-SENSORY EXPERIENCE

WIND
Wind moves the glass pieces gently.

SOUND
Glass pieces collide and create soft, soothing chimes.

LIGHT
Sunlight passes through glass, casting beautiful reflections.

Invisibility made visible.
Subtle forces, deeply felt.

LOCATION

Oosterpark, Amsterdam

MAQUETTE MAKING PROCESS

1. **RESEARCH & REFERENCE**
Studied the existing pavilion structure and gathered references.

2. **DIGITAL PREPARATION**
Separated the structure in Adobe Illustrator for laser cutting.

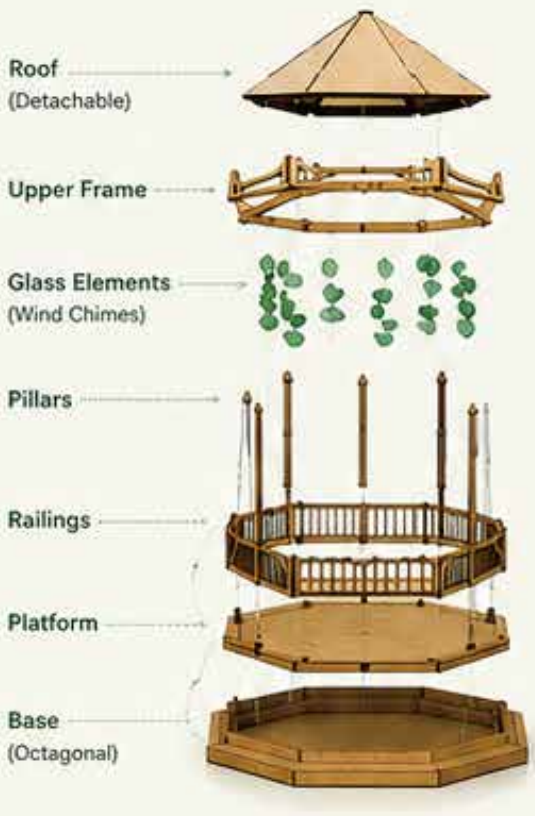
3. **LASER CUTTING**
Cut all components precisely using a laser cutter.

4. **ASSEMBLY**
Built the base structure layer by layer.

5. **DETAILS & INSTALLATION**
Added glass pieces, lighting and tested the interaction.

6. **FINAL MODEL**
Completed maquette with interactive glass, light and sound.

EXPLODED VIEW



HOW IT WORKS

WIND BLOWS
Natural wind moves the glass pieces.

GLASS CLINKS
Glass pieces collide and create chime sounds.

LIGHT REFLECTS
Sunlight passes through the glass and casts beautiful reflections.

Observe Listen Feel Connect

Slow Down, Be Present, Connect with Nature

MATERIALS

Wood (3mm)
Laser-cut for precision and stability.

Glass (Recycled)
Broken bottle glass, reused as wind chime elements.

String
Transparant nylon string for invisible suspension.

LED Light
Soft warm light to enhance the atmosphere.

VIDEO SHOOTING & EDITING

- Shot on personal phones
- Shot both indoors (classroom) & outdoors
- We made a storyboard & a scene plan with clear descriptions (action, camera angle,···)
- Beside shooting video, we recorded sound of glass clinking
- Edited on Premiere Pro: assemble clips, add effects, adjust light &

Technic Section

Visualise Webpage
Micro:bit
Circuit Model

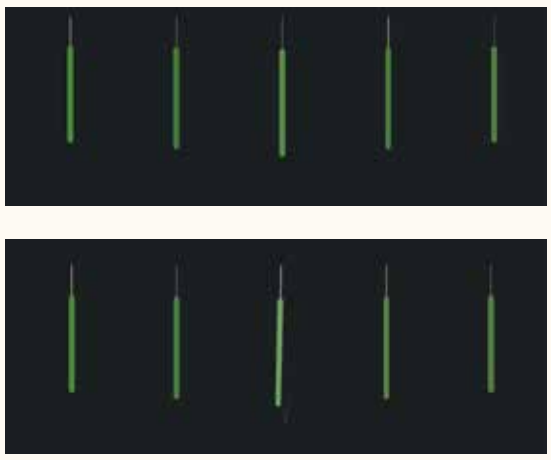
VISUALISE WEBPAGE

On the webpage the simulation is clearer than in the video, when touching one of the chimes it will light up, swing, cast reflections and make sounds.

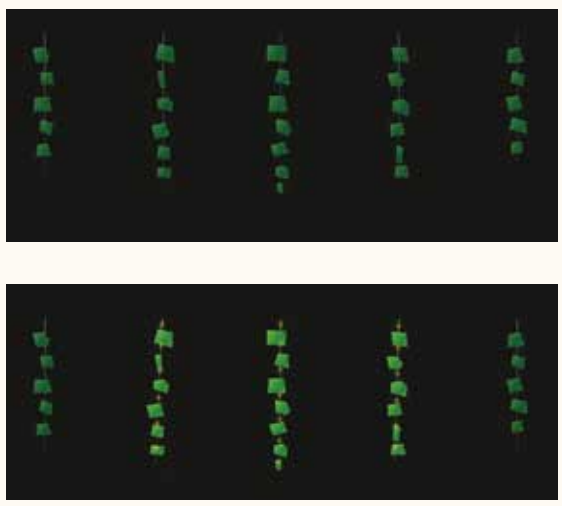
Started with simple sticks that light up when touching them just like we wanted to visualise in our video but weren't able to do that clearly...

Got feedback from teachers to make it look more like the final wind chimes with the glass and lights as well as adding sounds when touching the chimes...

Defult



Light up while sensor touched

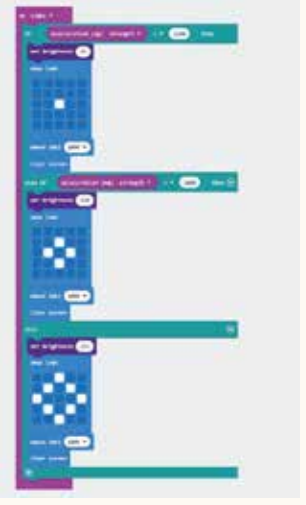


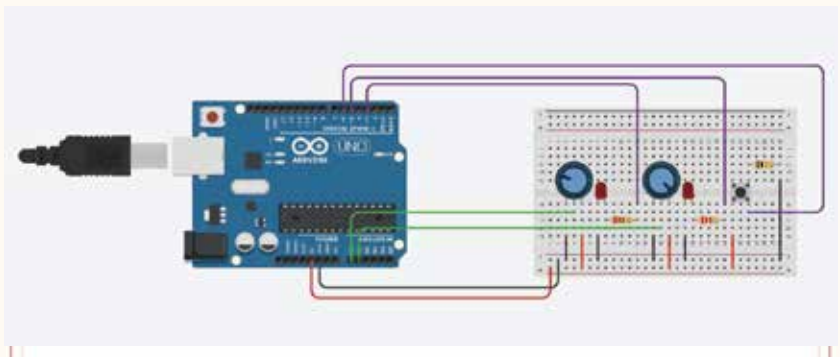
Enhence visual based on maquette

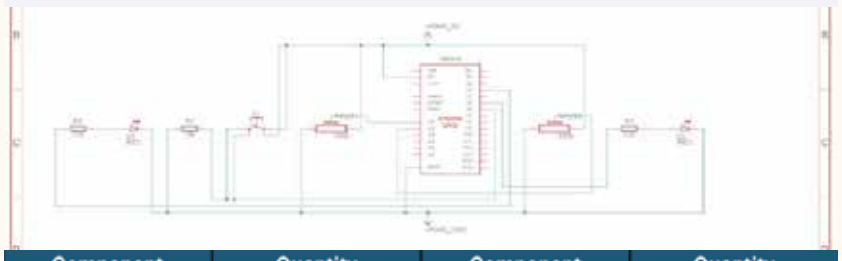
CIRCUIT MODEL

This circuit utilizes an Arduino Uno as the microcontroller. A potentiometer is used to simulate the intensity of the shaking, and the LED strip structure is simplified and represented by LEDs. When the pushbutton is pressed, it signifies that the structure has detected motion, thereby triggering the LEDs to light up.

1. Adjust the potentiometer to simulate different levels of shaking intensity.
2. Press the pushbutton to simulate the detection of motion, which drives the entire circuit.
3. Check the Serial Monitor to read the quantified values of the shaking intensity.
4. Observe the brightness of the LEDs and compare it with the shaking values displayed on the screen.







Component	Quantity	Component	Quantity
220Ω Resistor	2	LED	2
10kΩ Resistor	1	Pushbutton	1
Potentiometer	2	Arduino Uno	1

MICRO: BIT

We use micro:bit to detect shaking through its system. By using “if-else” statements, the system can judge the level of shaking and show different brightness for different shaking levels. During the demo, besides the changes in brightness, different shaking levels will also show different patterns on the screen. We do this to make the presentation much clearer and easier to understand.