

Excellence  
 NZQA Intended for teacher use only

## Ranginui and Papatūānuku

In the beginning there was nothing, that nothing soon became darkness then suddenly two gods appeared Ranginui, the sky father and Papatūānuku, the earth mother. They loved each other very much and became inseparable. Papatūānuku had eight children born in the darkness between them. Tāne- Mahuta, Tāwhirimātea, Rongomātane, Haumia-Tiketike, Tangaroa, Tūmatauenga, Rūaumoko and Rehua.



## Tāne Mahuta

One day, Tāne (god of the forest), tired of living in darkness with no room to run and play, decided to ask his brothers to help him separate his parents.

## Tawhirimatea

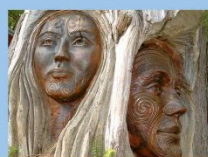
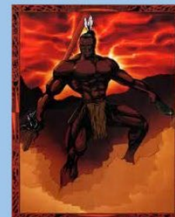
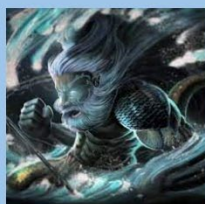
All of the brothers agreed to help push ranginui up, away from papatūānuku except Tawhirimatea (god of the wind and sea). Each of the brothers pushed with all their might, one by one, but everytime they were unsuccessful.

That was until Tāne came up with one final plan. He turned himself into a small plant and waited. He waited so long take he had grow into a giant Kauri tree. He has so tall and so strong that he pushed his parents apart from each other, taking Tāwhirimātea up with Ranginui.



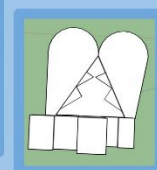
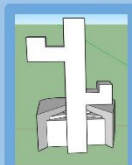
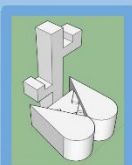
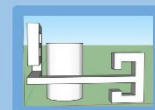
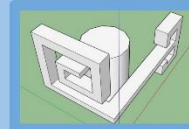
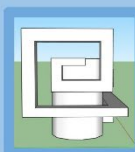
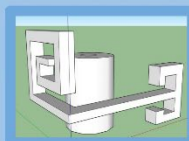
## Tangaroa (god of the sea)

## Tūmatauenga (God of war)



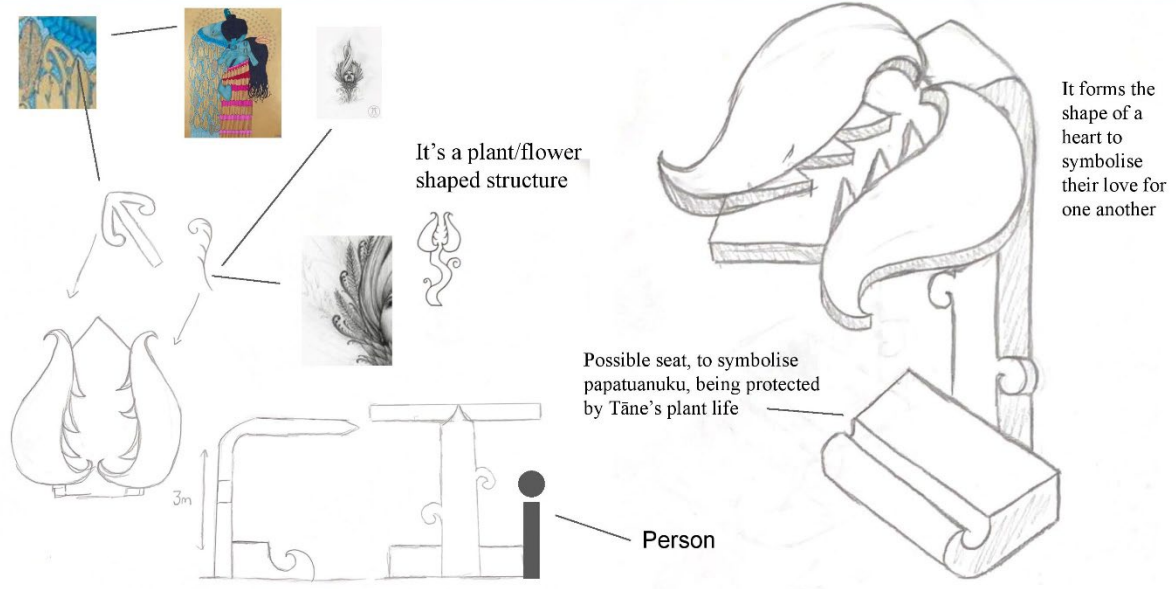
After ranginui and papatūānuku were split Tāne-Mahuta was tasked with clothing his mother with his forests and bushes. While ranginui was covering her with lakes and rivers with his tears that rained down. In his fury Tāwhirimātea created heavy wind and storms.

## Ideation sketches:

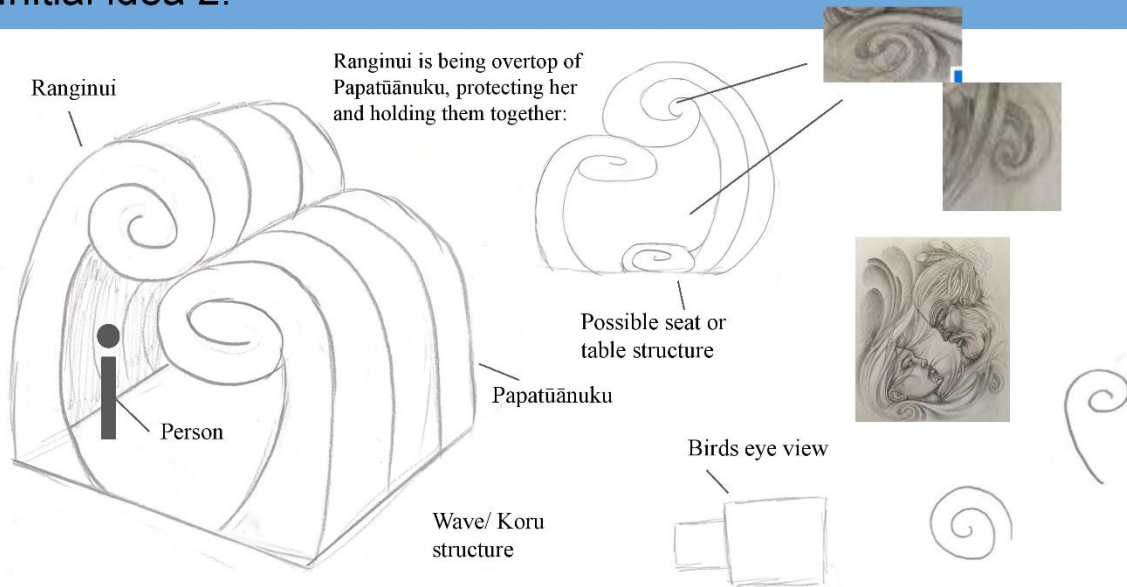




### Initial idea 1:



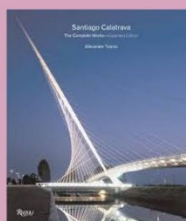
### Initial idea 2:



## Architect research:

### Santiago Calatrava Valls:

- He's from Valencia, Spain
- Born 28th of July, 1951, he is currently 71
- Some of his recent major works include, the palace of congresses, the Margaret hunt hill bridge, peace bridge, I.S.T building of the Florida polytechnic university, museum of tomorrow, the world trade centre transportation hub, and the oculus
- "Architecture is a code. It's a pure code, derived from the dimensions of nature."
- Fazlur Khan International Fellowship, Médaille d'Argent de la Recherche et de la Technique, Gold Medal of the Institution of Structural Engineers, the Gold Medal from the American Institute of Architects (AIA), the Eugene McDermott Award, the Golden Plate Award of the American Academy of Achievement, James Parks Morton Interfaith Award
- Curved over structures, lots of spikes, like whale bones or the ribcage of an animal, looks like feathers, reminds me of the designs from the movie aliens, domed, like an alien spacecraft.



## Santiago Calatrava's significant works



Museum of tomorrow:  
Rio De Janeiro



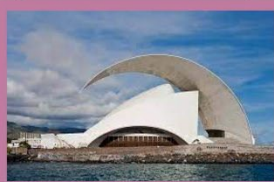
city of arts and sciences:  
Valencia, Spain



AV Mediapadana: Reggio  
Emilia, Italy



UAE pavilion: Dubai



Auditorio de Tenerife: Canary  
islands, Spain



World trade centre transportation  
hub (The Oculus): New York City



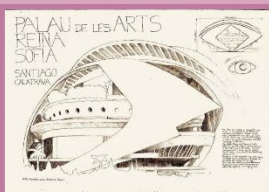
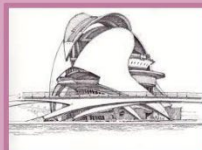
Milwaukee Art Museum:  
Wisconsin, USA



Palau de les Arts Reina  
Sofia: Valencia, Spain

## Key Characteristics

- Symmetrical
- Curved
- Reflective / reflected on water
- Lots of the buildings are built over water
- white/ pristine
- Futuristic
- flowy/ wavy
- Ripples
- Lots of curved lines
- spiderweb

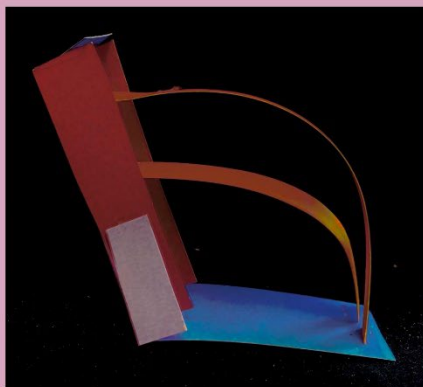
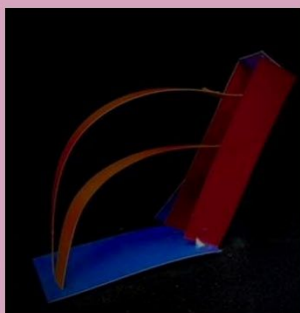


## Preliminary sketches





### 3d preliminary forms



### Initial idea 1: 2d views



The poles differentiate in height and distance

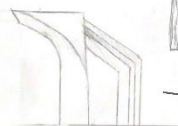
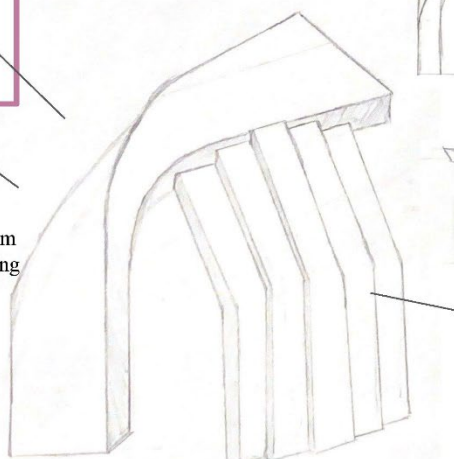


Bird's eye view

Person

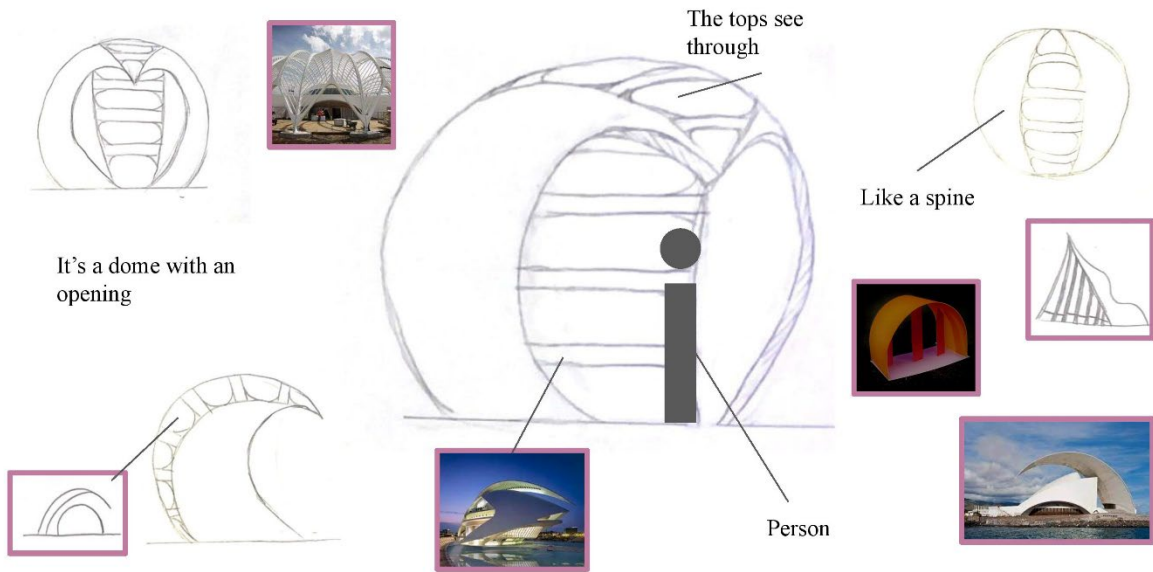


The shelter is inspired from Santiago's twisting building design

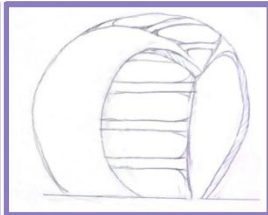
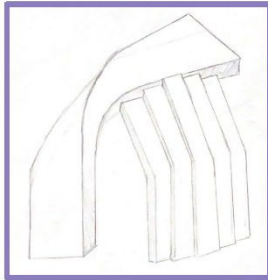


Use of repeating lines

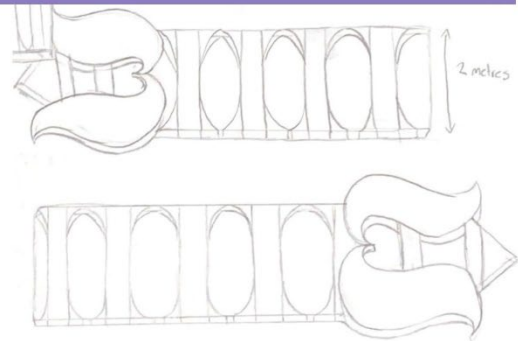
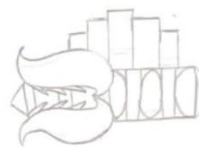
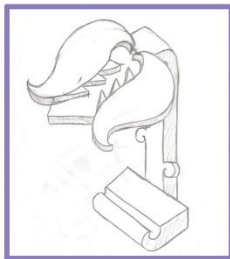
## Initial idea 2:



## Extending ideas



From three of my initial ideas, I took a lot of my inspiration from the my flower design from my creation story initial ideas. I also used the see through pattern in my dome structure inspired by Santiago Calatrava so that the structure lets in natural sunlight during the day. I then considered using the tilted part of my other Santiago Calatrava initial idea. I improved it by simplifying the heart shape, and made sure to elongated the size of the structure to add more space and give more shade to people using it. I also have decided to repeat the chosen design 4 times so I can use as much space as what has been given to me.



## Extended idea's design



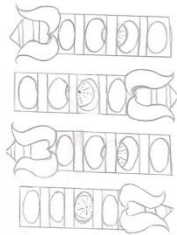
### Seat design

The seats inspired by kina shells, I was inspired by both starting points, with Papatūānuku's connection to wildlife, and Santiago Calatrava's use of natural elements in his work

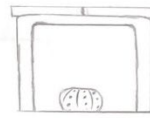
The seats aren't set in place so there wouldn't be a set amount in each structure



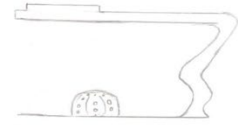
### Bird's eye view



3m

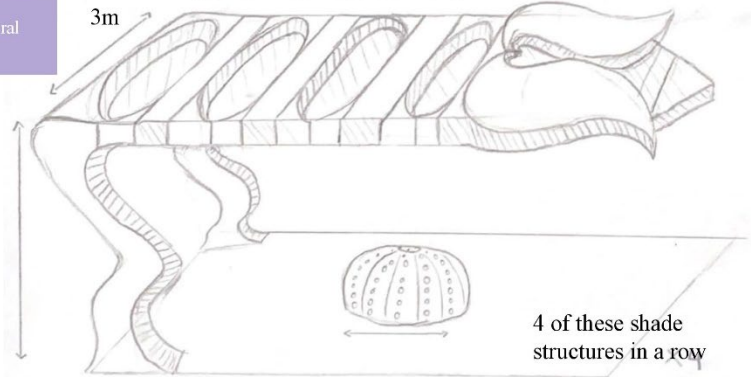


Front and side view



6m

3m



4 of these shade structures in a row

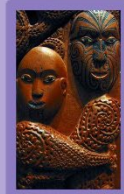
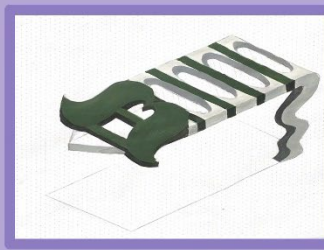
## Materials

Most depictions of Papatūānuku and Ranginui are traditional wood carvings, so I'm going to incorporate wood into my design.

But practically wood isn't the strongest material to use as support in my structure so I'm going to use steel as my main material.

The openings in the top of the structure is going to be thick planes of glass, to let natural light in.

For colour, The main supporting material will be painted white because it's the main colour that Santiago Calatrava uses in his works, while the wood pieces would be painted green to symbolize Papatūānuku's plant life, along with the seat, that will also be made of wood.





## Final Design

