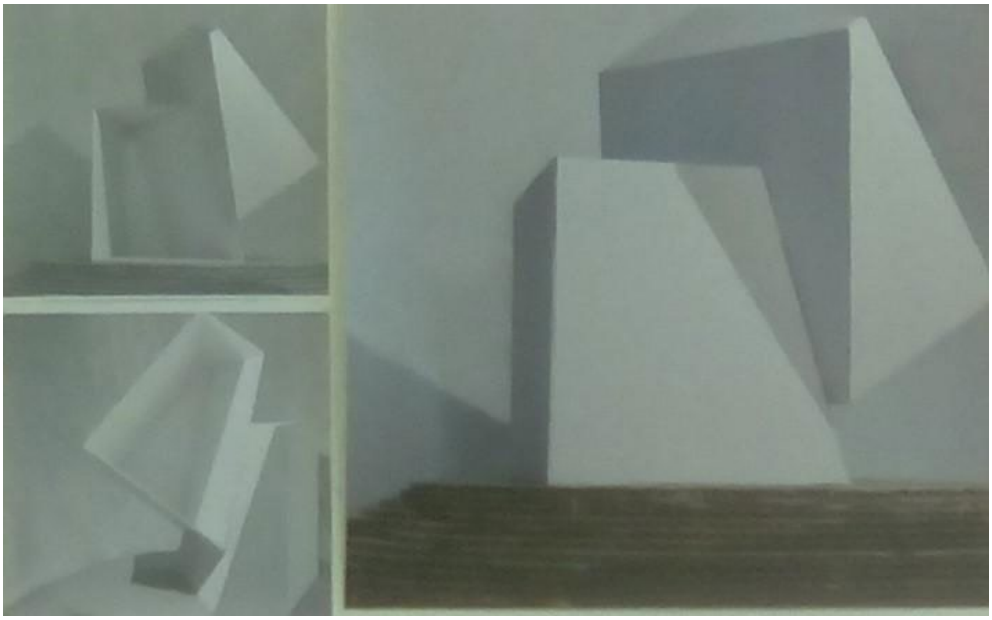
ARCH5112 Design Studio 1 2023

SEMESTER 1

Project 1 **ARCHITECTURE & CONTEXT**

Weeks 4 - 6 **SPACE + STRUCTURE** **26%**

SPACE



Student Exemplar (1): Photos of Space Model in landform

"Architecture is the thoughtful making of space." - Louis Kahn

space **– Āputa Whai Take – āputa - *be empty, vacant, with a gap; whai take - to have a purpose, of use, useful***

- is the fundamental tool of architecture, being the air/place between 3D/2D/1D elements, both natural and fabricated. Space is perceived visually through the control and quality of light. Space is also perceived by the other senses through the qualities of sound, smell, touch and temperature.

AIMS

In the Space brief you will translate your previous Mass model into a 3-dimensional planar model, settled into your Island landscape.

By photographing your planar model in the island landscape, you will develop your perception of how orientation to the sun affects the qualities of the space in and around your architecture.

Your capacity to describe interior space, through rendering in perspective, will be developed.

You will start to understand the conventions of sections, drawing cuts through interior spaces, of your project within the chosen landscape.

TASKS

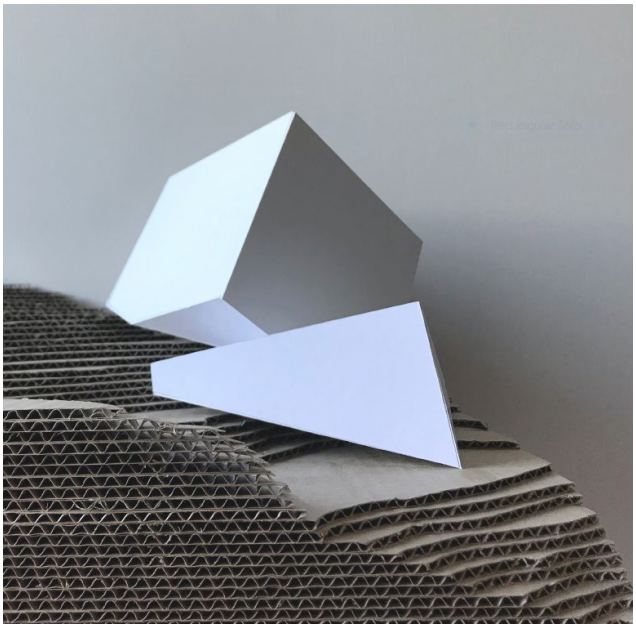
1. Make a carefully crafted 1:100 model of your solid cardboard Mass

You will construct a model of your Mass model from white card, no less than 1mm thick.
The card will be carefully cut and glued to create a refined and convincing structure.
You may use the Mass model as a template or measure and draw faces to recreate the mass model in 2-D planar pieces.
For very clean edges, you may use a mitre to make bevelled joints.

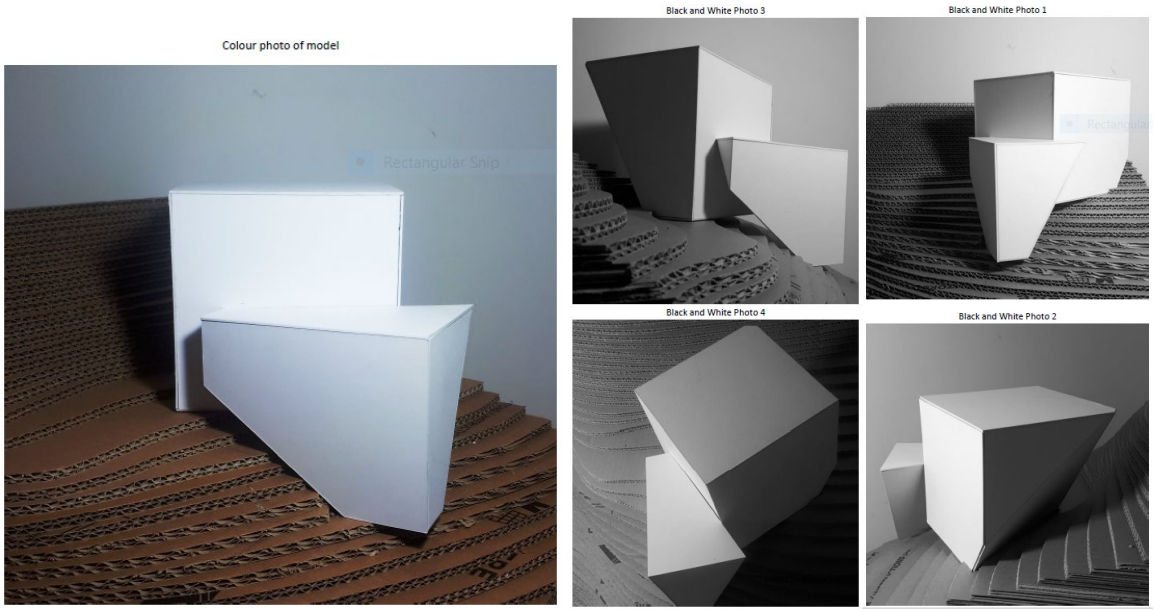
2. Take photographs of your planar card model on its site in your corrugated contour model

Your planar model should be placed in your cardboard contour model and photographed.
You may experiment with natural or artificial light sources in order to explore the shadow and spaces created around your planar model.

Make 4 black and white images at 210mm x 210mm each.
Choose a 5th image to print out in colour at 420mm x 420mm.



Student Exemplar (2): Image of Planar Model in Site Contour

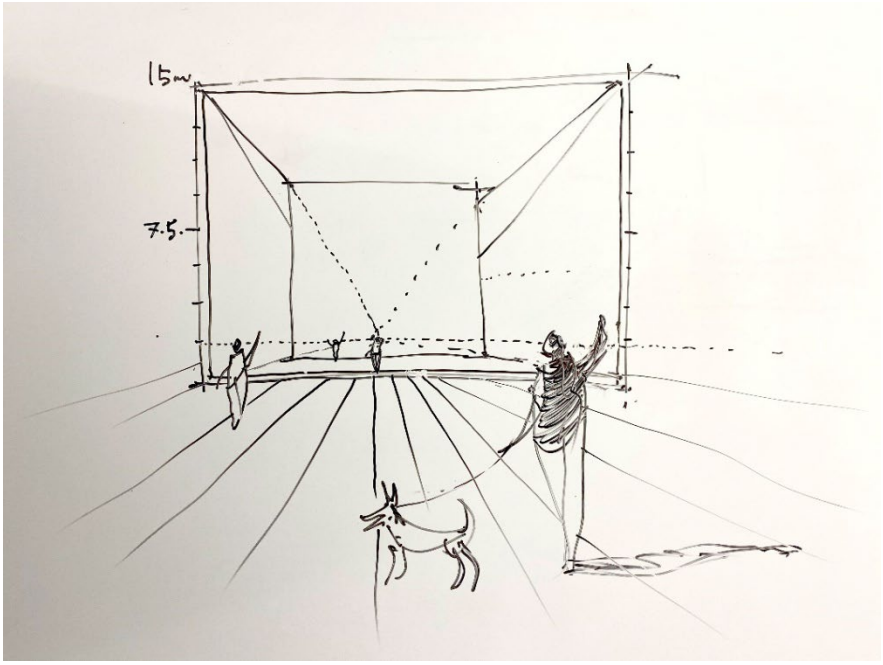


Student Exemplar (3): Planar Model in Site Contour

3. Explore the internal space of one of your planar models

What internal space does your planar model create?
Remove one side - wall/roof/floor – of the larger of your planar models.
This is an abstract exercise, where your chosen model will be placed outside of the Site Contour model, on a flat surface.
Study the internal space within, experimenting with external lighting.

Take a number of photographs, paying careful attention to create a one-point perspective image, with a realistic horizon line, which places the view point at human figure height, inside your interior model.

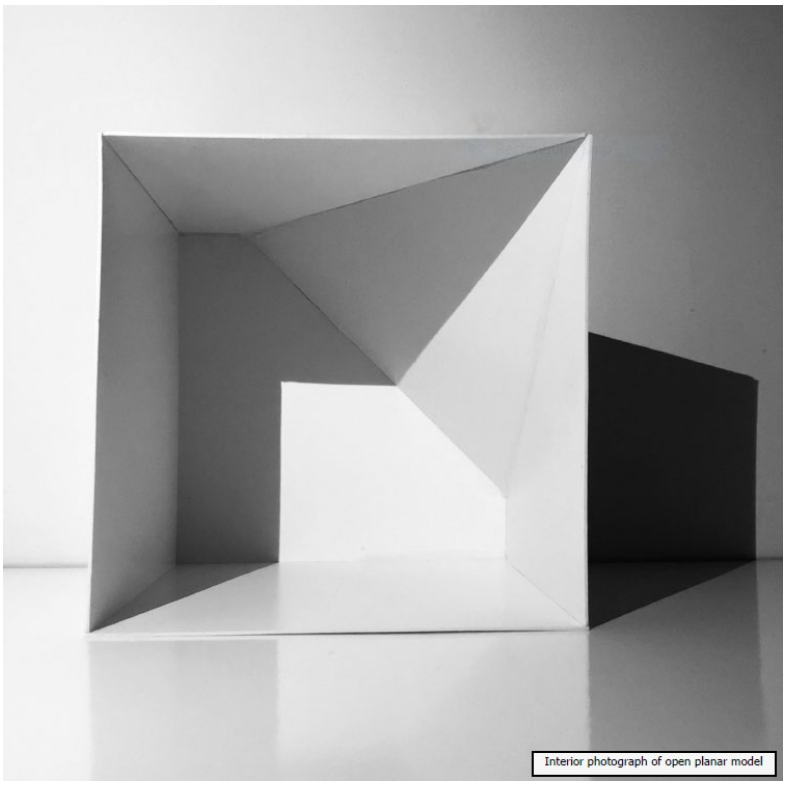


Sketch of perspectival interior of SPACE Model. Hamish Foote.

Select 1 photograph of the interior space of the model which describes best the quality of the inner environment.

Print out a good quality copy of this image, in black and white.

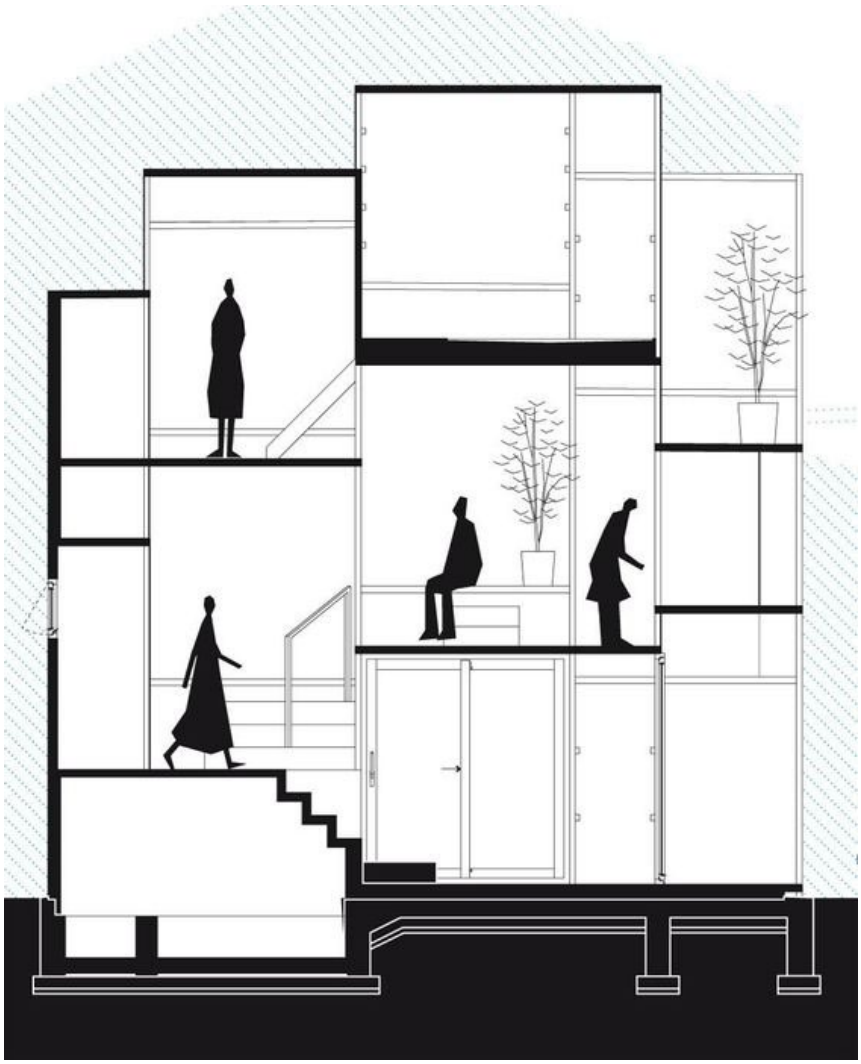
Student Exemplar (4): Image of carefully lit interior of SPACE Model



Student Exemplar (5): Image of carefully lit interior of SPACE Model

THE SECTION

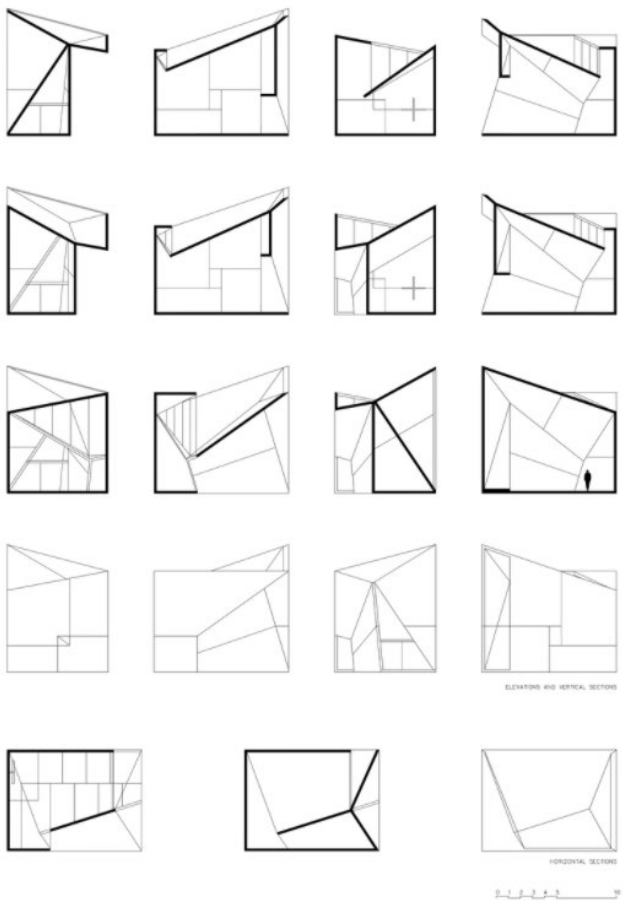
The section is an important and particularly informative drawing, assisting in describing the volume, scale and nature of interior spaces.



The NA House, designed by Sou Fujimoto, is located on a small side street in Tokyo

https://www.domusweb.it/en/architecture/2011/12/20/tokyo-s-vertical-thresholds-3-sou-fujimoto.html

Sequential sections are an even more effective method of describing interior spaces, as one moves through the structure.



S.M.A.O Chapel in Valleacerón – sequential sectional studies

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http://www.archtalent.com/projects/chapel-in-valleaceron

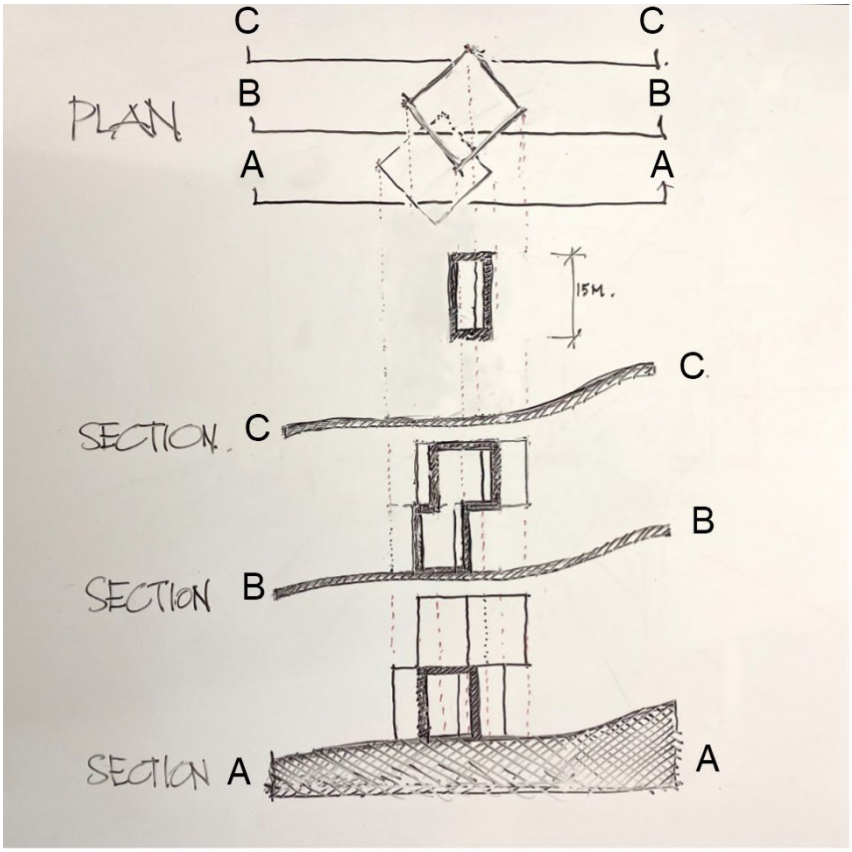
5. Draw a site plan of your Space composition on the contour model

Recompose your planar model in the site model.
At this stage, you may change slightly your previous composition as you develop a clearer understanding of the interior spaces of the model. The spaces may now conjoin creating new possibilities. Careful consideration should be given to the third element, the space between the volumes and planes.
Paying attention to line weights to define clearly the contour of the site and the roof plan of the mass, draw a site plan at scale 1:200.

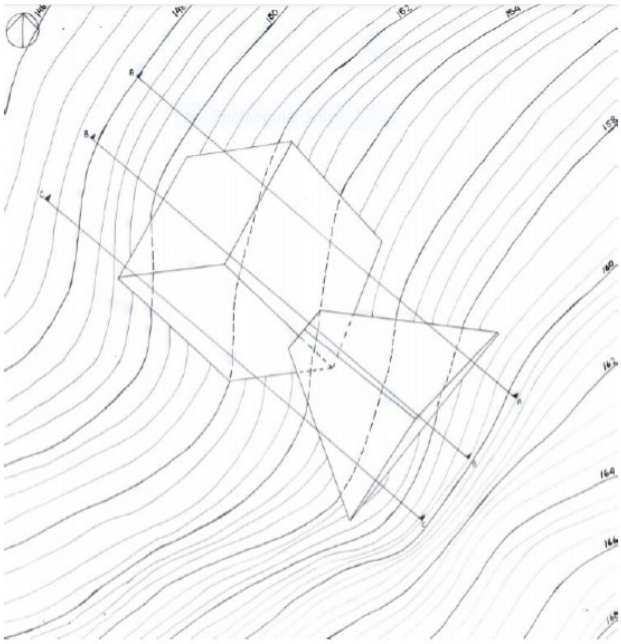
6. Draw 3 parallel sections through your 'architecture in context'

Locate 3 parallel section lines through the site plan – AA – BB – CC.
Select the section lines carefully, in order to cut through the structure at even intervals in the direction which describes the most interesting 'spaces' in your composition.

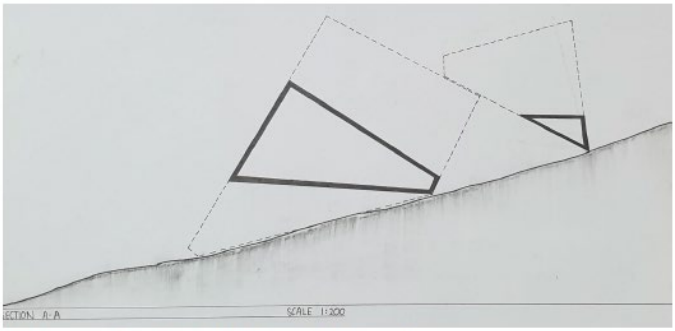
Draw the 3 sections, at the scale of 1:200.
Pay attention to line weights to describe clearly the interior spaces the sections cut through, together with the relationship to the ground line and contours of the terrane.
Give thickness to cut walls to describe the interior and exterior spaces.



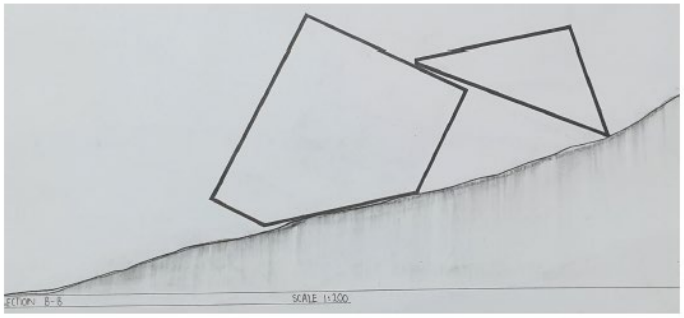
Sketch to set up Sequential Sectional drawings of SPACE Model. Hamish Foote.



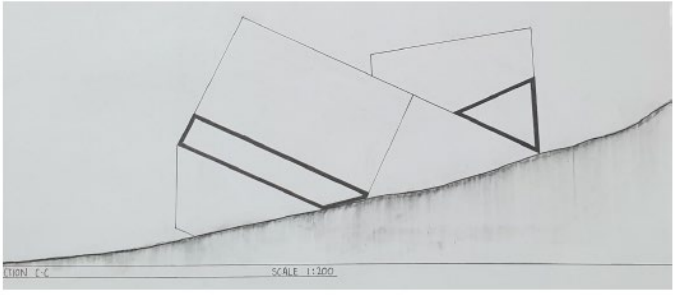
SPACE SITE PLAN, SCALE 1:200



SECTION A-A OF SPACE MODEL SCALE, 1:200

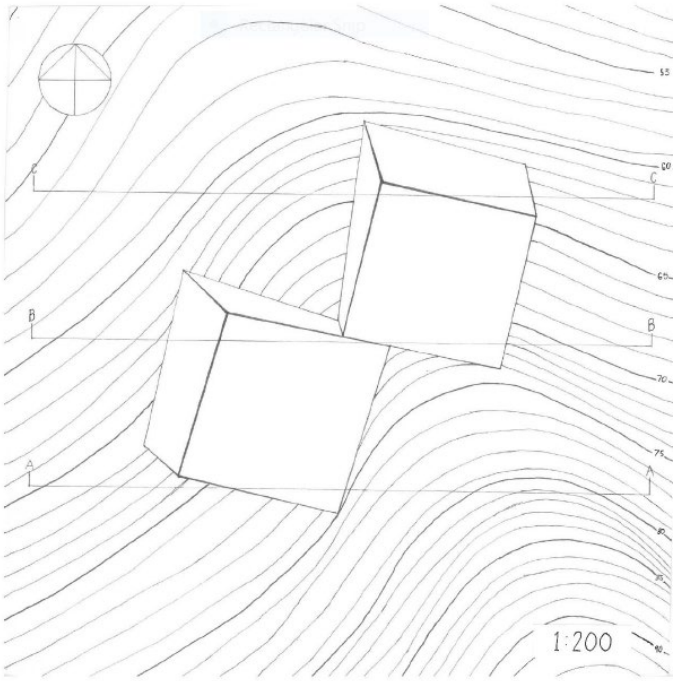


SECTION B-B OF SPACE MODEL, SCALE 1:200

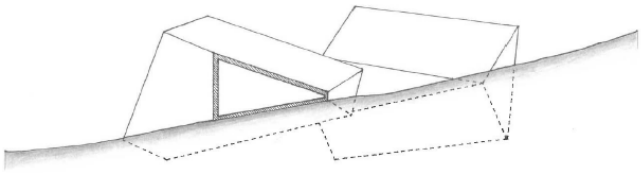


SECTION C-C OF SPACE MODEL, SCALE 1:200

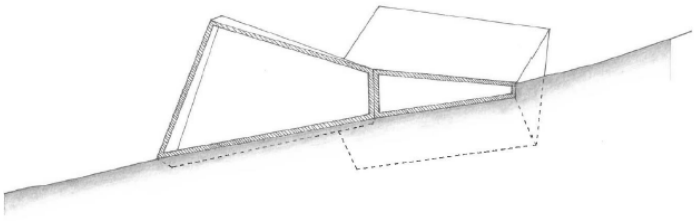
Student Exemplar (6): Plan and Sequential sections of SPACE Model in Context



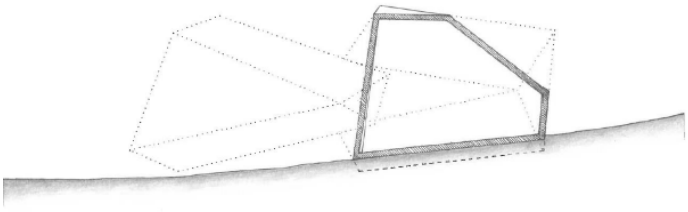
Site Plan



SECTION A-A 1:200



SECTION B-B 1:200



SECTION C-C 1:200

Student Exemplar (7): Plan and Sequential sections of SPACE Model in Context

SPACE PIN UP SUBMISSION

4 x black and white photos of model	210mm x 210mm
1 x colour photo of model	420mm x 420mm
1 x interior photographs of open planar model	297mm x 297mm
1 x site plan scale 1:200	297mm x 297mm
3 x sections scale 1:200	paper sized to fit

GRADING CRITERIA (Associated L/O's 1,2,3,5) 13% of semester grade

1.	Compelling photographs of well-crafted card model	**5 photos**	**45%**
2.	Effective image of the interior of the model	**1 photo**	**10%**
3.	Clear plan and sections, correctly annotated, with attention to line weights and poche, and a correct indication of ground line	**4 drawings**	**35%**
4.	Well composed, comprehensive pin-up together with a PDF submission, including clear, well focused images of all elements	**Pin-up + PDF**	**10%**

SPACE PIN UP SUBMISSION **Thursday 27th April 3pm**

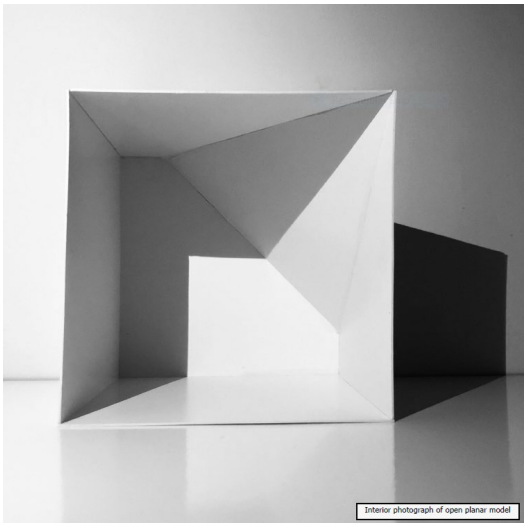
Colour photo of model

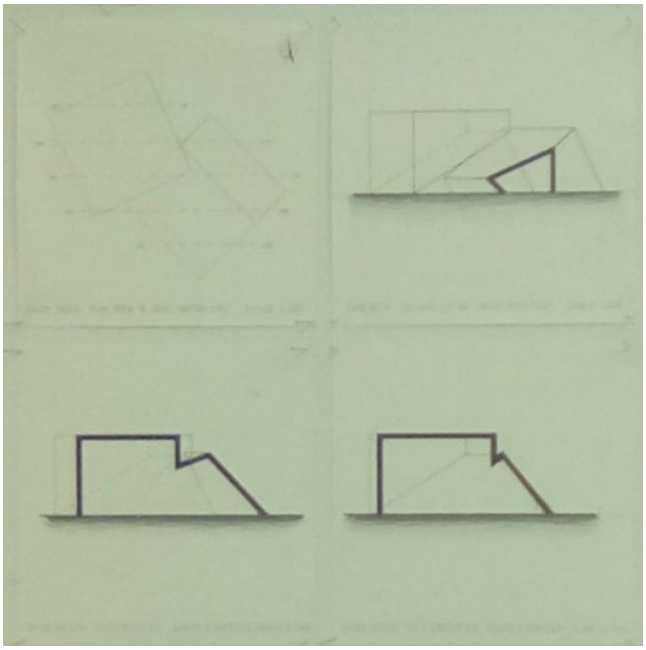
Black and White Photo 3

Black and White Photo 1

Black and White Photo 4

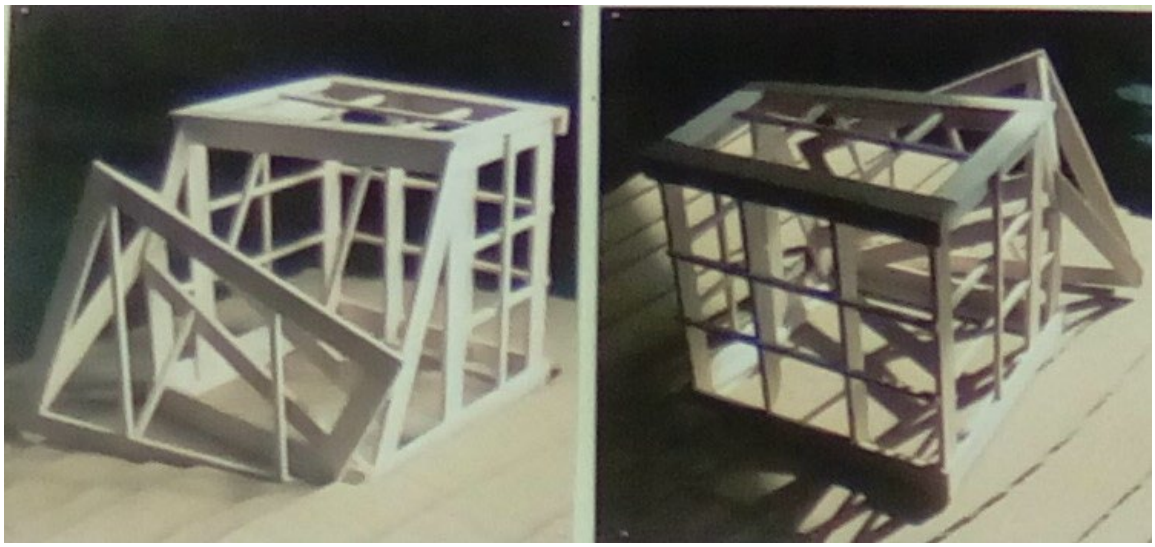
Black and White Photo 2





Student Exemplar (8): completed outcomes for SPACE

STRUCTURE



Student Exemplar (9): Structural Model in landscape context

"I like ruins because what remains is not the total design, but the clarity of thought, the naked structure, the spirit of the thing." - Tadao Ando

structure – **Hangatanga** - ***(noun) construction, building, structure***
- a stable assembly of material elements designed and constructed to function as a whole to support and transmit loads and forces to the ground

AIMS

To understand how to translate the spatial intentions of a project into a structural and material framework

To refine the craft of modelling and the manipulation of materials

To practice how effective lighting and photographic images of a model can communicate the qualities and nature of a project

To draw detailed plans and sections which describe material and spatial qualities and connections.

TASKS

1/ Construct a structural model of your spatial planar model – scale 1:100

Starting from your planar-spatial model reconstruct and articulate the form and sense of the space created using **1D elements**
– i.e. translate your planar model into a 3-dimensional Structural model comprised of 1D components.

Think about the compositional connections between the two intersecting volumes and possible relationships which embellish and amplify the relationship.

Is the model strongly connected to the ground?
Emphasise this connection with multiple or more substantial 1D elements which anchor it securely to the land.
Does the model hover above the land?
Prop the frames up to create disconnection and separation from the ground.
If your two elements are separated by space, is there, in any case, a connection that can be described by fine threads or other 1D components?
How does the space between interact and complement the structure?

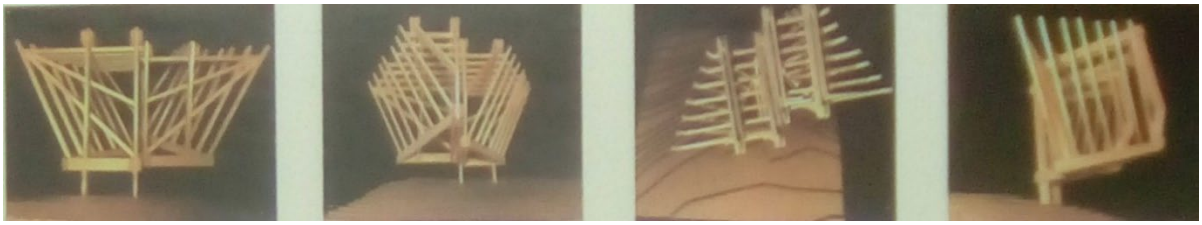
This model may represent a structural organisation which is a facsimile of the studs, rafters and joists of a timber building.

The model may also use found materials such as string, twigs, cut card, straws or any other 1-dimensional linear components, joined together by gluing or binding.

The resulting construction should describe your structure, developing and expressing the relationship between the interior and exterior spaces in your model, and between the different volumes created and their relationship to the ground and place.

2/ Photograph your structural model in context

Take 4 photographs of your structural model on the cardboard site.
These should be well-lit and be selected to express the particular qualities of your structural arrangement.



Student Exemplar (10): Images of STRUCTURE Model in Context

Student Exemplar (11): Image of STRUCTURE Model in Context

Photo 1 of structural model

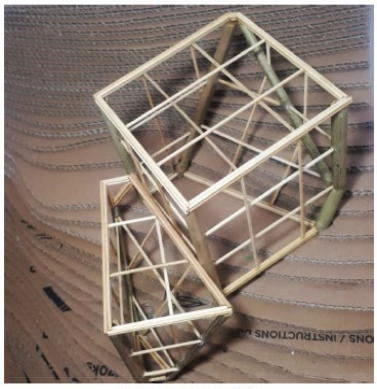
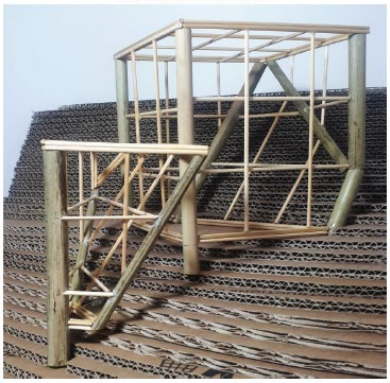


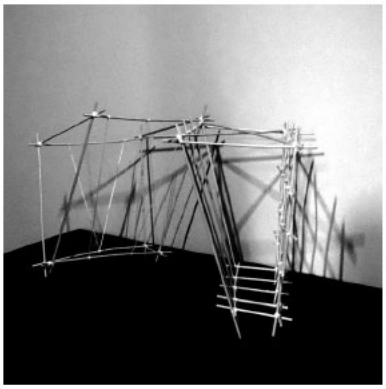
Photo 3 of structural model

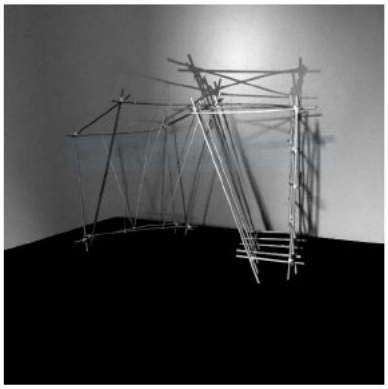
Photo 2 of structural model

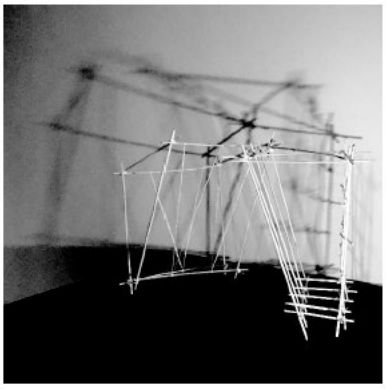
Photo 4 of structural model



Student Exemplar (12): Images of STRUCTURE Model in Context

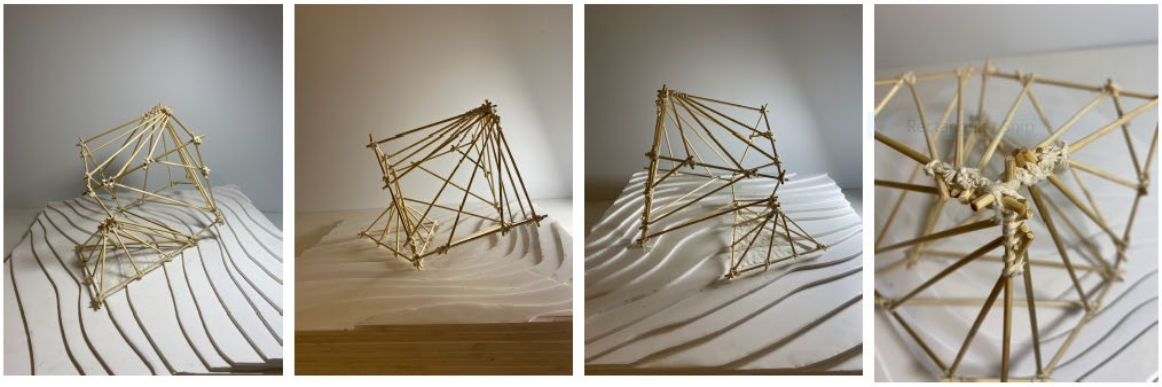






Student Exemplar (13): Images of STRUCTURE Model in Context

Student Exemplar (14): Image of STRUCTURE Model in Context



Student Exemplar (15): Images of STRUCTURE Model in Context

Student Exemplar (16): Image of STRUCTURE Model in Context

3/ Draw a plan and a section of your model IN CONTEXT

Draw a plan of your structural project at 1:100.
Remember the North point.

Draw a section through your structure at 1:100, selecting a cut position that expresses most effectively the true nature of your design.
Clearly draw the section line on your Plan, with tabs indicating the direction of the view.

The sections must show clearly the contours and landform, using line weight and precision to express also some notional foundation of the structure in the ground.

Look closely at the images and note:

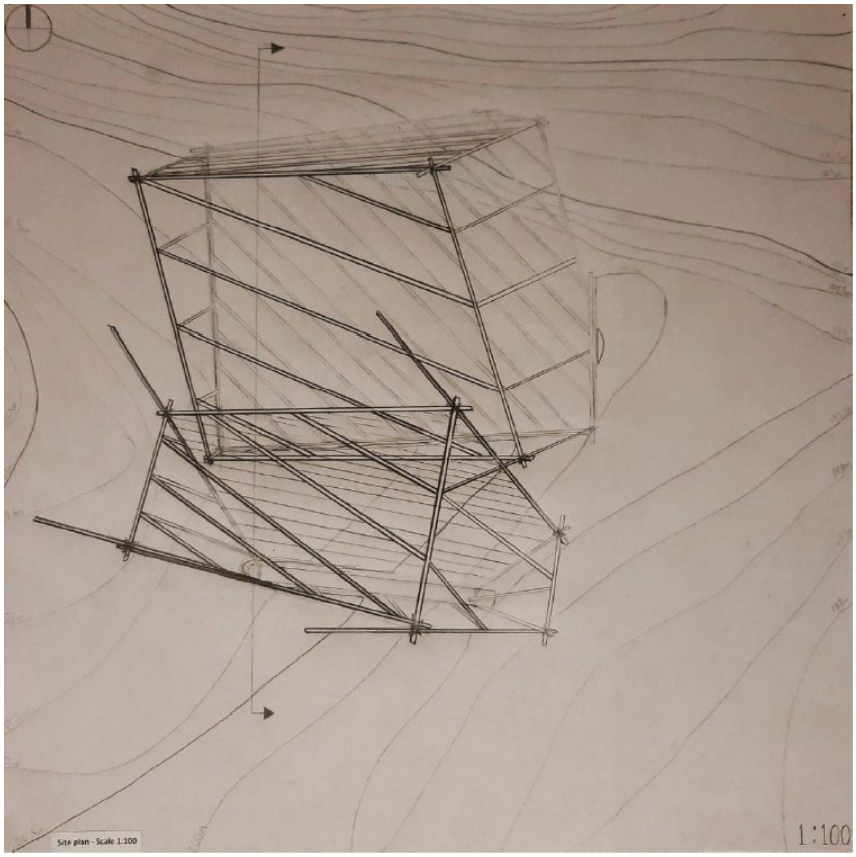
- the variation in line weights which express clearly what is closer to the viewer and what is further away

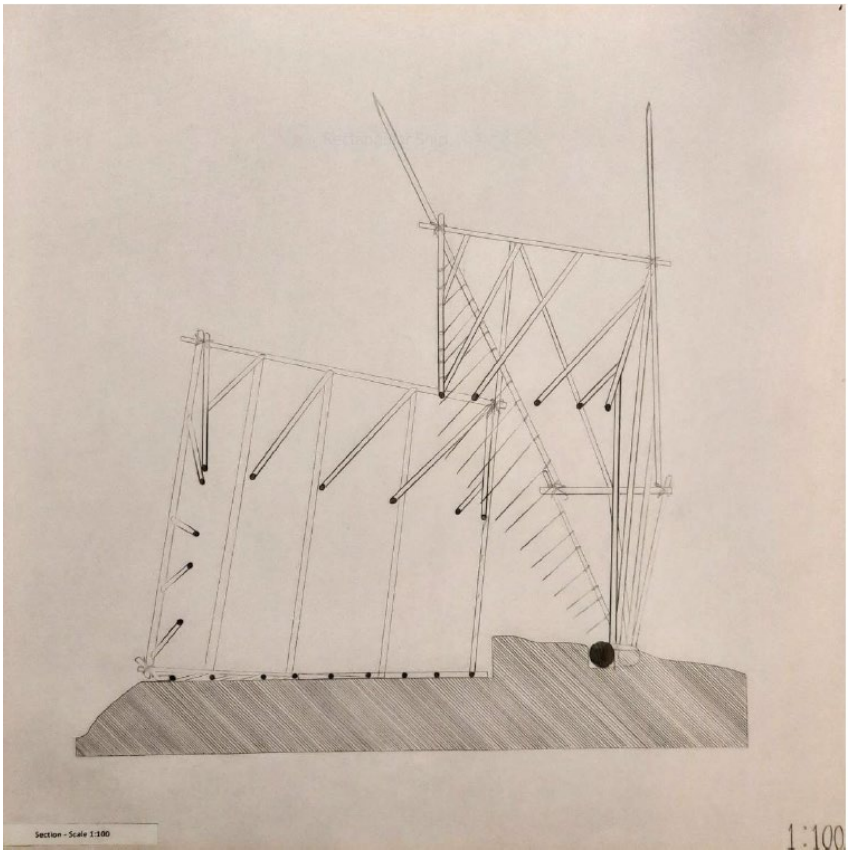
- the clear topography of the land and the ground line, which is solid and substantial

- the section, where it cuts through actual materials, is indicated as solid

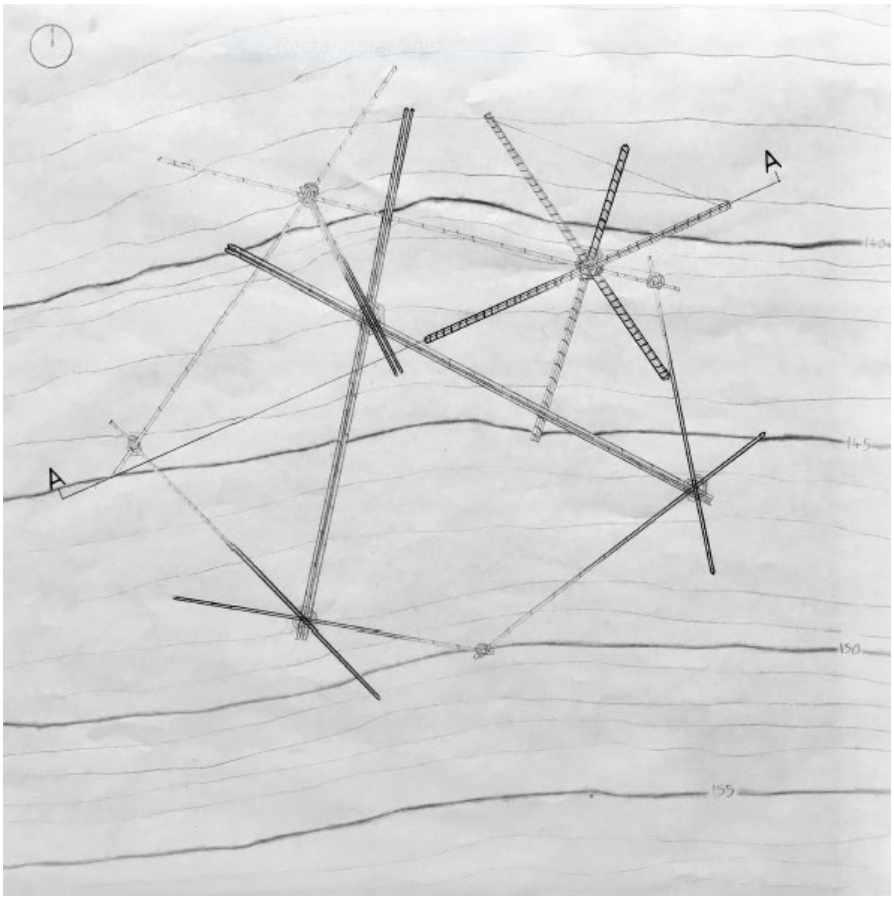
- where the cut through solid material is on an angle, this changes the circle into an elliptical form, a square profile into a rhomboid shape

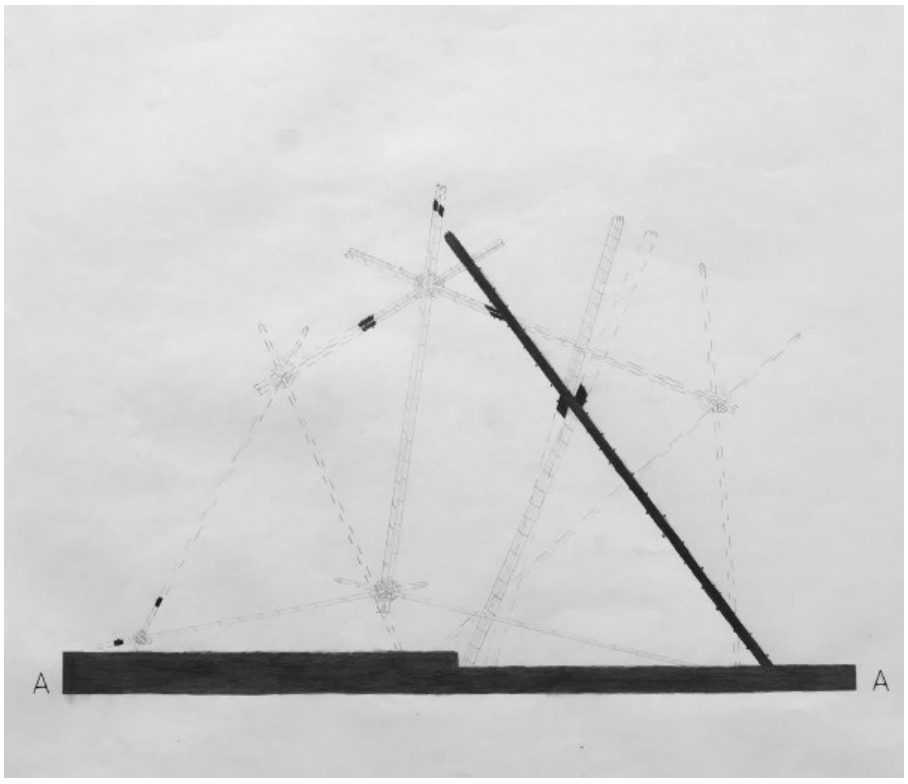
Student Exemplar (17): Plan and Critical Section of STRUCTURE Model in Context





Student Exemplar (18): Plan and Critical Section of STRUCTURE Model in Context





Student Exemplar (19): Plan and Critical Section of STRUCTURE Model in Context

STRUCTURE - PIN UP SUBMISSION

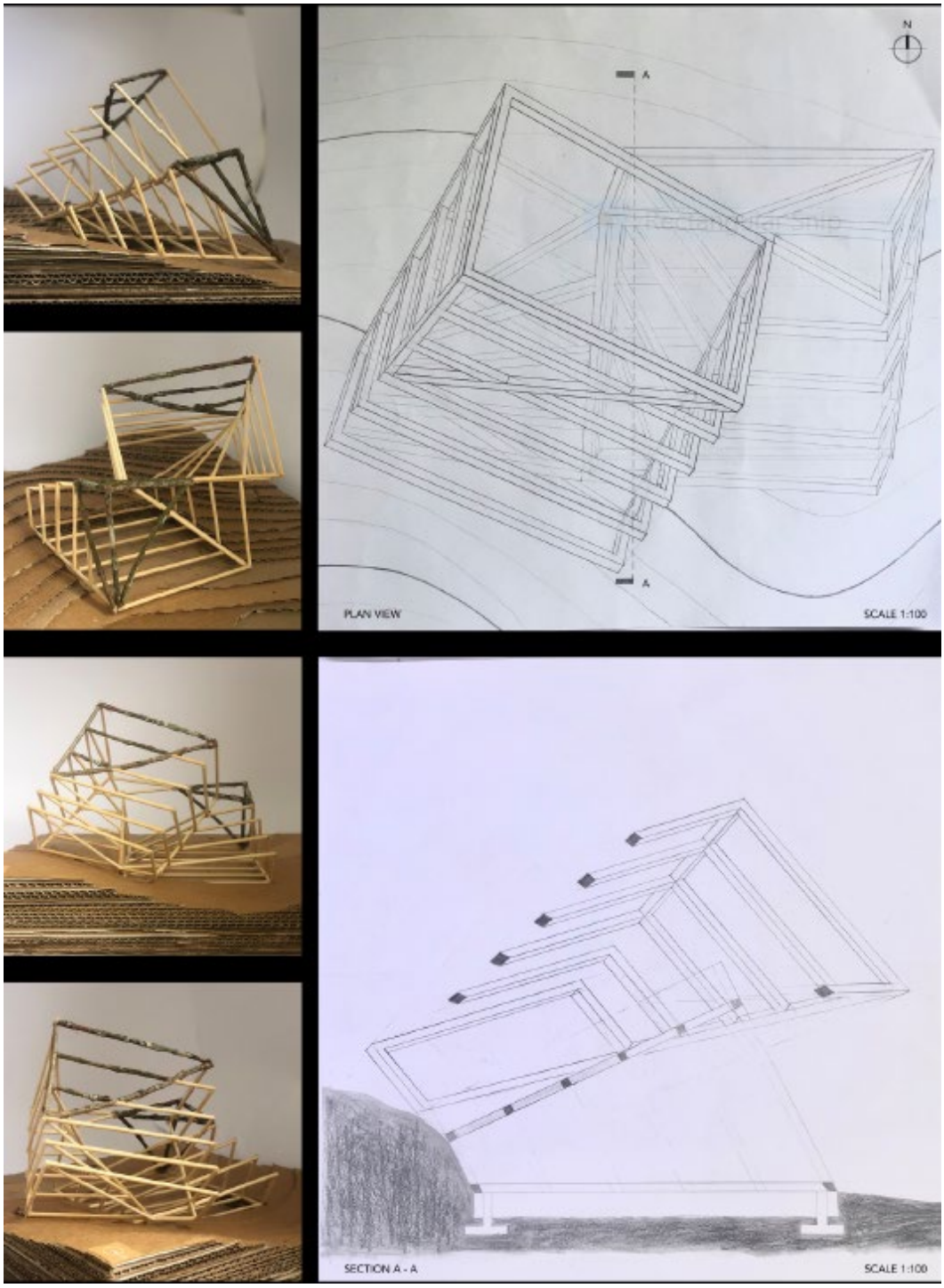
4 x Photos of structural model		210mm x 210mm
1 x Plan	– scale 1:100	297mm x 297mm
1 x Section	– scale 1:100	297mm x 297mm

Note: paper sizes are notional to assist you in drawing to the correct scale, but not essential to produce the drawings

GRADING CRITERIA — 13% of semester grade

(Associated L/O's 1,2,3,5)

1. Well-crafted model in site at 1:100 - or approximation of site terrain	**Model**	**25%**
2. Compelling photographs of structural stick model	**4 photos**	**20%**
3. Correct, well-drawn high-contrast plan of structural model	**1 plan drawing**	**23%**
4. Correct, well-drawn high-contrast section of the structural model, chosen at a critical position in design	**1 section drawing**	**22%**
5. Well-composed, comprehensive pin-up together with a PDF submission, including clear, well focused images of all elements	**Pin-up + PDF**	**10%**



Student Exemplar (20): Final Outcomes of STRUCTURE Model in Context

WEEKS 4 - 6 SPACE + STRUCTURE 26%

Thursday 27th April 1:00 - 5:00pm
How to construct a presentation – pin-up strategies
3pm - Final pinup of **Space + Structure submission**

NOTE: The Assessment Event is comprised of the physical pinup in studio and a supporting digital record of the submission.

The deadlines for these are:

Pinup by 3pm on Thursday 27th April

Digital Submission by 4pm on Friday 28th April

The Digital Submission MUST include a photograph of the work pinned up in studio and a carefully composed document of each of the deliverables, drawings, photos and models.

If for any reason you are unable to meet these criteria you can make an application for an Affected Performance Consideration (APC).

SPACE + STRUCTURE Deliverables Thursday 27th April 3pm

SPACE PIN UP SUBMISSION

4 x black and white photos of model	210mm x 210mm
1 x colour photo of model	420mm x 420mm
1 x interior photographs of open planar model	297mm x 297mm
1 x site plan scale 1:200	297mm x 297mm
3 x sections scale 1:200	297mm x 297mm

STRUCTURE PIN UP SUBMISSION

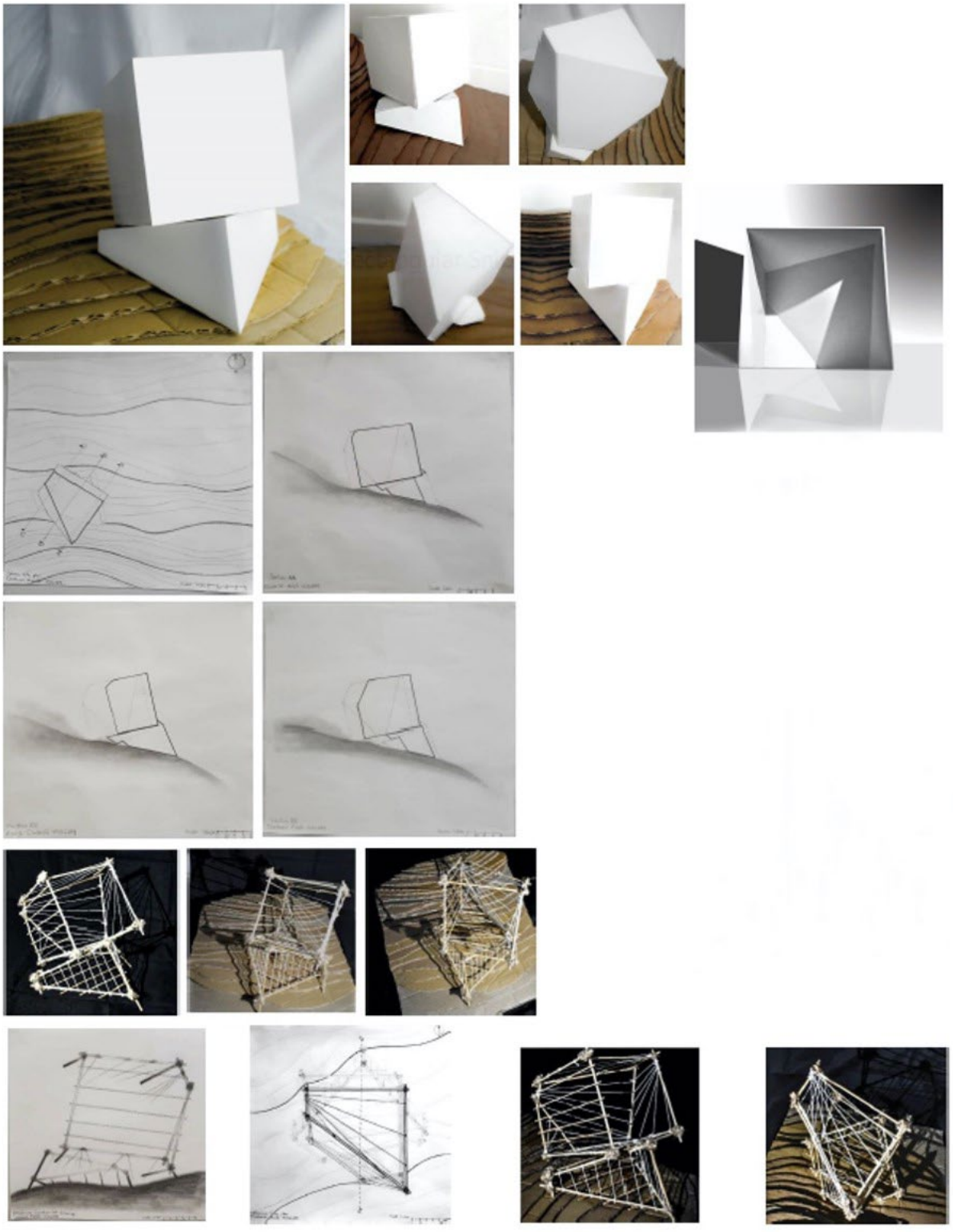
4 x Photos of structural model	210mm x 210mm
1 x Plan – scale 1:100	297mm x 297mm
1 x Section – scale 1:100	297mm x 297mm

Note: paper sizes are notional to assist you in drawing to the correct scale, but not essential to produce the drawings

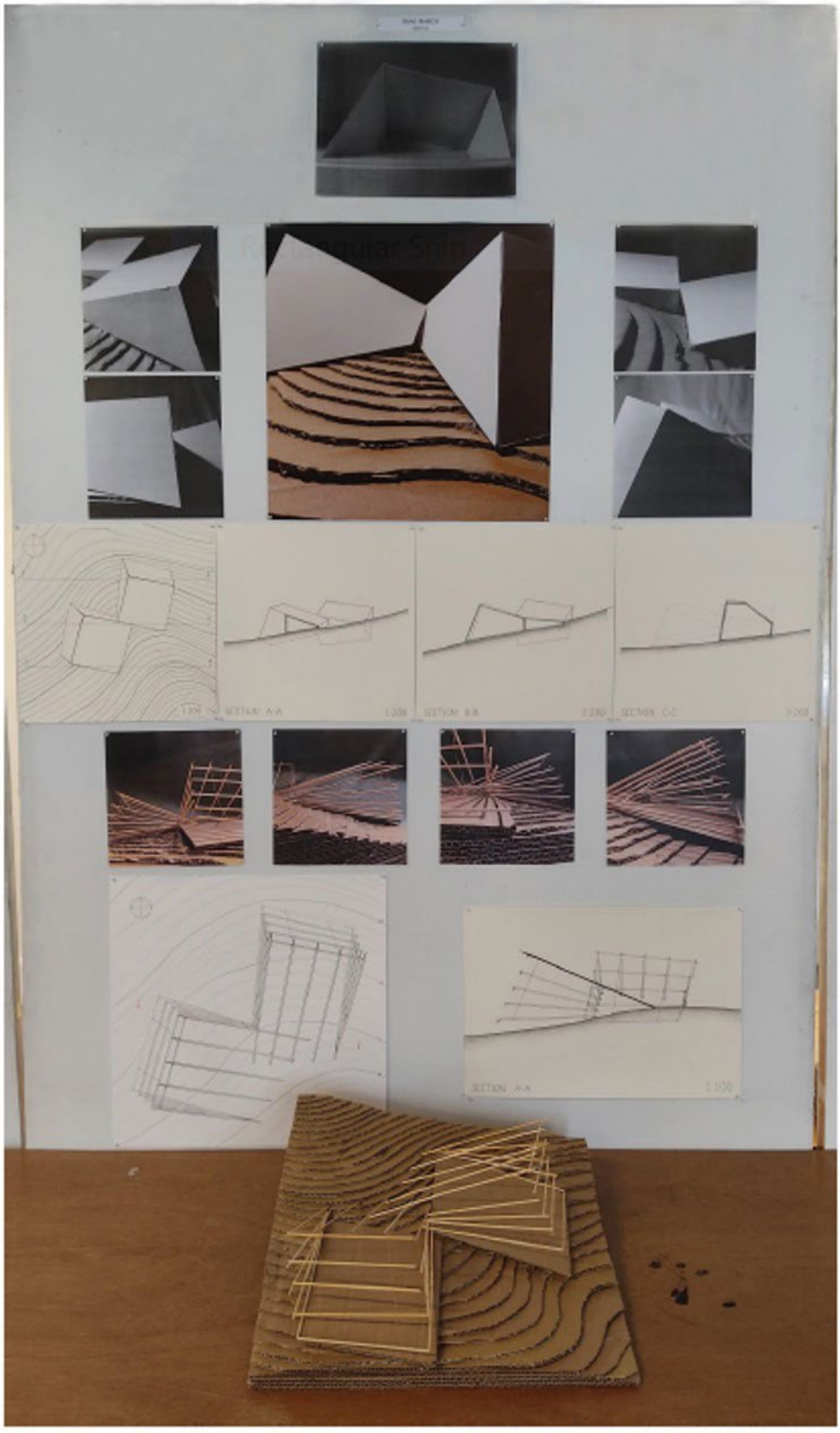
RESULTS

A (100 - 80%), **B** (79 - 65%), **C** (64 - 50%)**, D** (49 - 40%), **E** (39 - 0%)

Student feedback by arrangement with tutor during Week 7



Student Exemplar (21): Final Presentation for SPACE + STRUCTURE



Final Pin-up

Student Exemplar (22): Final Presentation for SPACE + STRUCTURE