

# SEMESTER 1

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## Project 1 ARCHITECTURE & CONTEXT

Week 1

ISLAND

CONTENT

### TASKS DESCRIPTION

#### 1. Make a series of ink blots

Using black ink and a straw, make a series of ink blots on 210mm x 210mm card (120gm)  
Experiment with different techniques for distributing the ink.  
Experiment by adding water to dilute the ink to create interesting tonal ranges in your ink blot.

You should have 5 different variations from which to pick one ink blot, which you find to be the most intriguing.

This ink blot will become your **ISLAND**.



Student Exemplars (1): ISLAND inkblot – differing shape and land qualities

## 2. Using your chosen INKBLOT, create a contour map for your ISLAND

Look attentively at your ink blot.

Imagine the darker parts to be high peaks. Maybe there are white areas within your ink blot which could be lakes or rivers, or fiords between higher areas.

Create a landscape within your ink blot to define it as a 'place', an island of approximately 2km square in the middle of the sea.

Your ink blot should extend across the 210mm x 210mm sheet, making the area of your island, approximately 2kms square at 1:10,000 scale ( $\pm 2$  km square).

Draw a 200m i.e. 2cm x 2cm grid over the ink blot island to help you understand its scale.

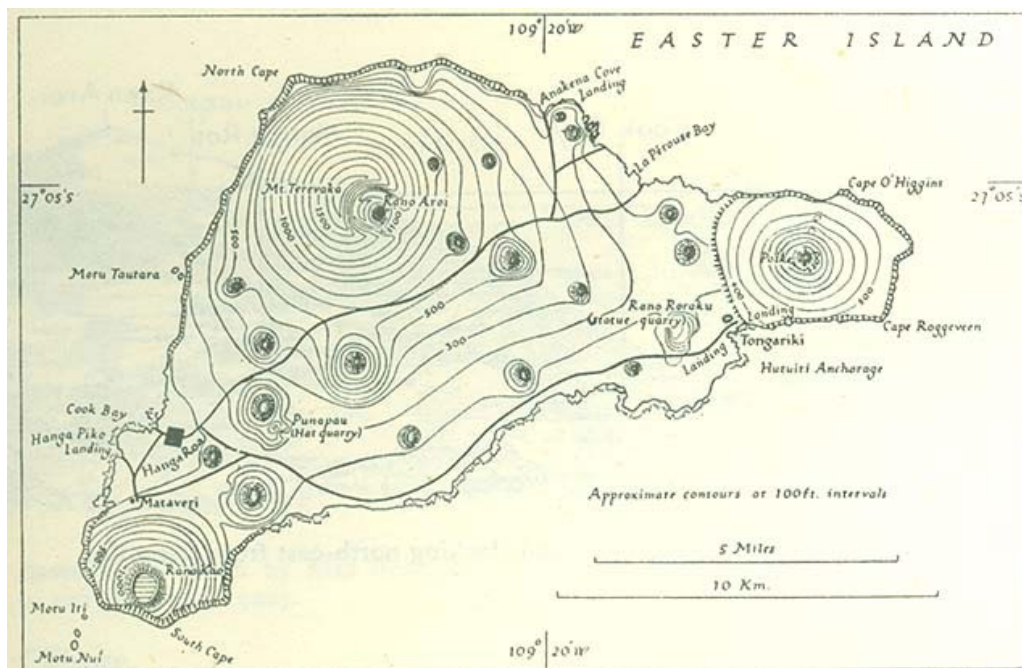
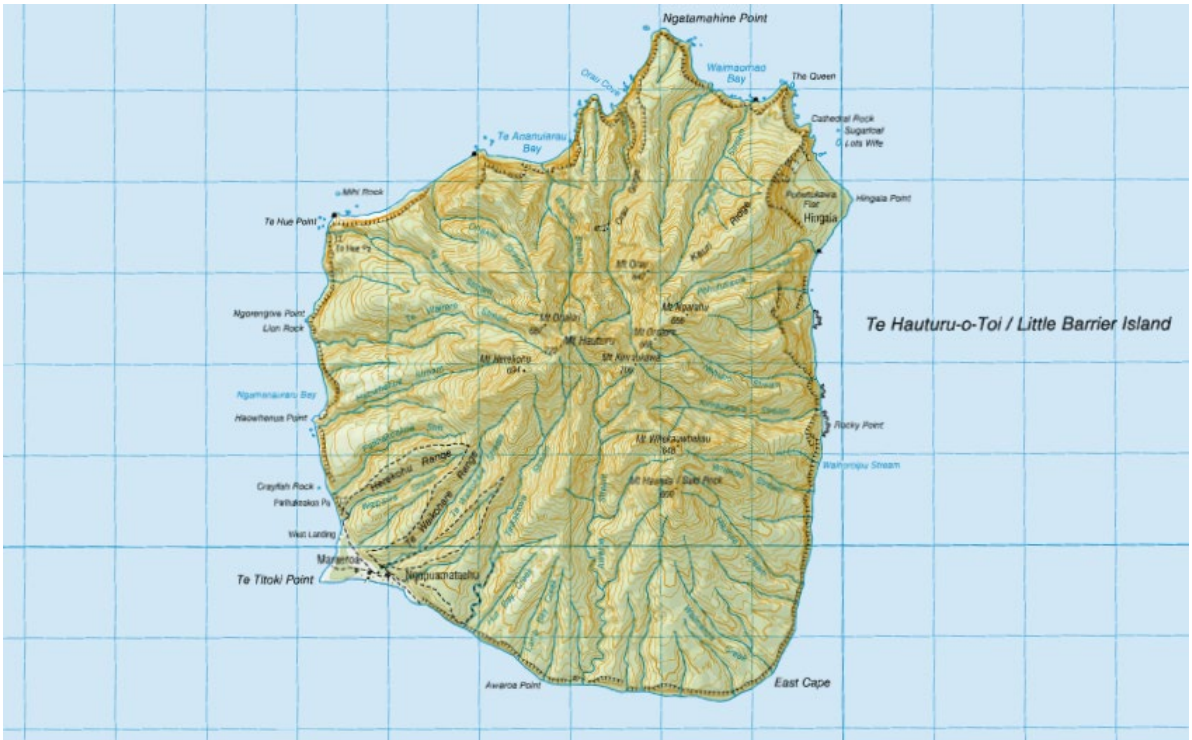


Fig. 18. Easter island

Based on: (1) Admiralty chart no. 1386; (2) L. J. Chubb, *Bernice P. Bishop Museum Bulletin*, no. 110, p. 32 (Honolulu, 1933).

Easter Island "Pacific Islands" [Geographical Handbook Series]. Great Britain. Admiralty. Naval Intelligence Division, 1943-1945.

[https://legacy.lib.utexas.edu/maps/historical/pacific\\_islands\\_1943\\_1945.html](https://legacy.lib.utexas.edu/maps/historical/pacific_islands_1943_1945.html)



“Hauturu/Little Barrier Island.” New Zealand Topographical Map, NZ Topo Map. November 2021.  
<https://www.topomap.co.nz/NZTopoMap/nz9269/Hauturu%2FLittle-Barrier-Island/>



“Hauturu/Little Barrier Island.” New Zealand Topographical Map, NZ Topo Map. November 2021.  
<https://www.topomap.co.nz/NZTopoMap/nz9269/Hauturu%2FLittle-Barrier-Island/>

Study the topographical maps above note:

- rivers and streams follow the valleys between ridges, describes by 'v' shaped contour lines
- mountain peaks are marked by a dot and the number indicating the highest point
- cliffs and vertical drops are indicated by a series of contour lines being drawn on top of each other indicating the shear drop at that point

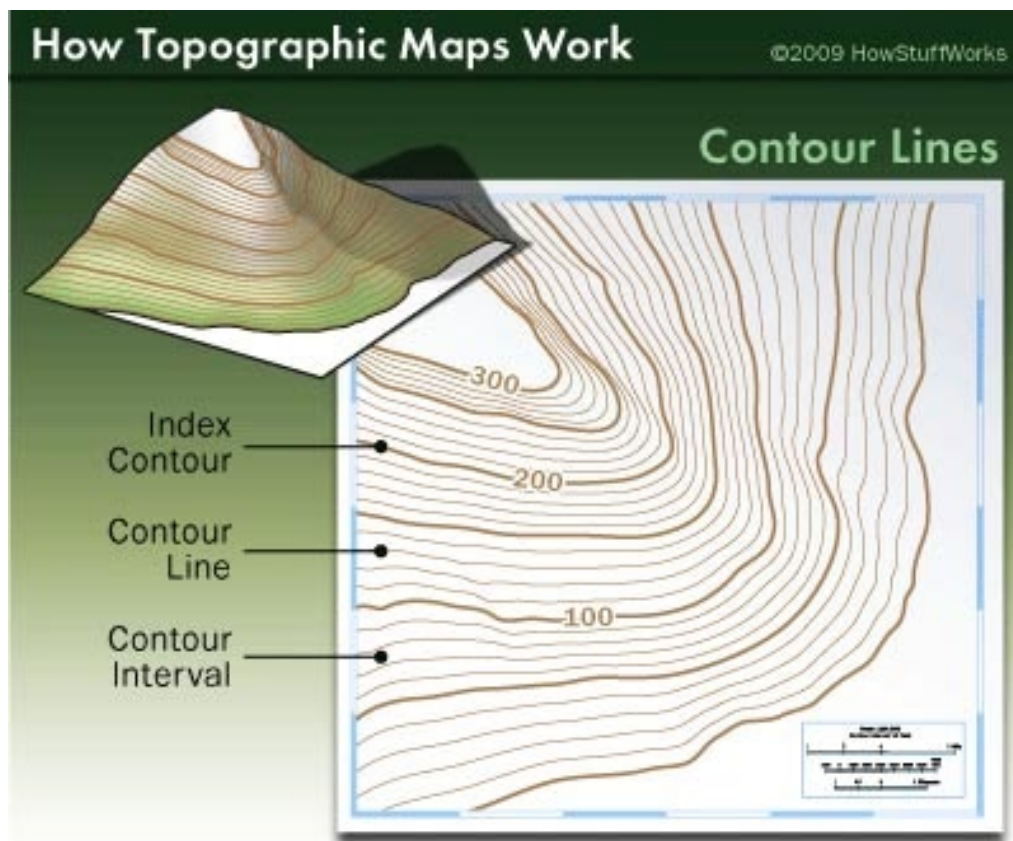
To assist you in understanding contours and how they work, using your device, find an Auckland location you are familiar with on GeoMaps.

<https://geomapspublic.aucklandcouncil.govt.nz/viewer/index.html>

This may be the area where you live, a place you have visited, a landscape you know well.

Study the map of it and how it is represented.

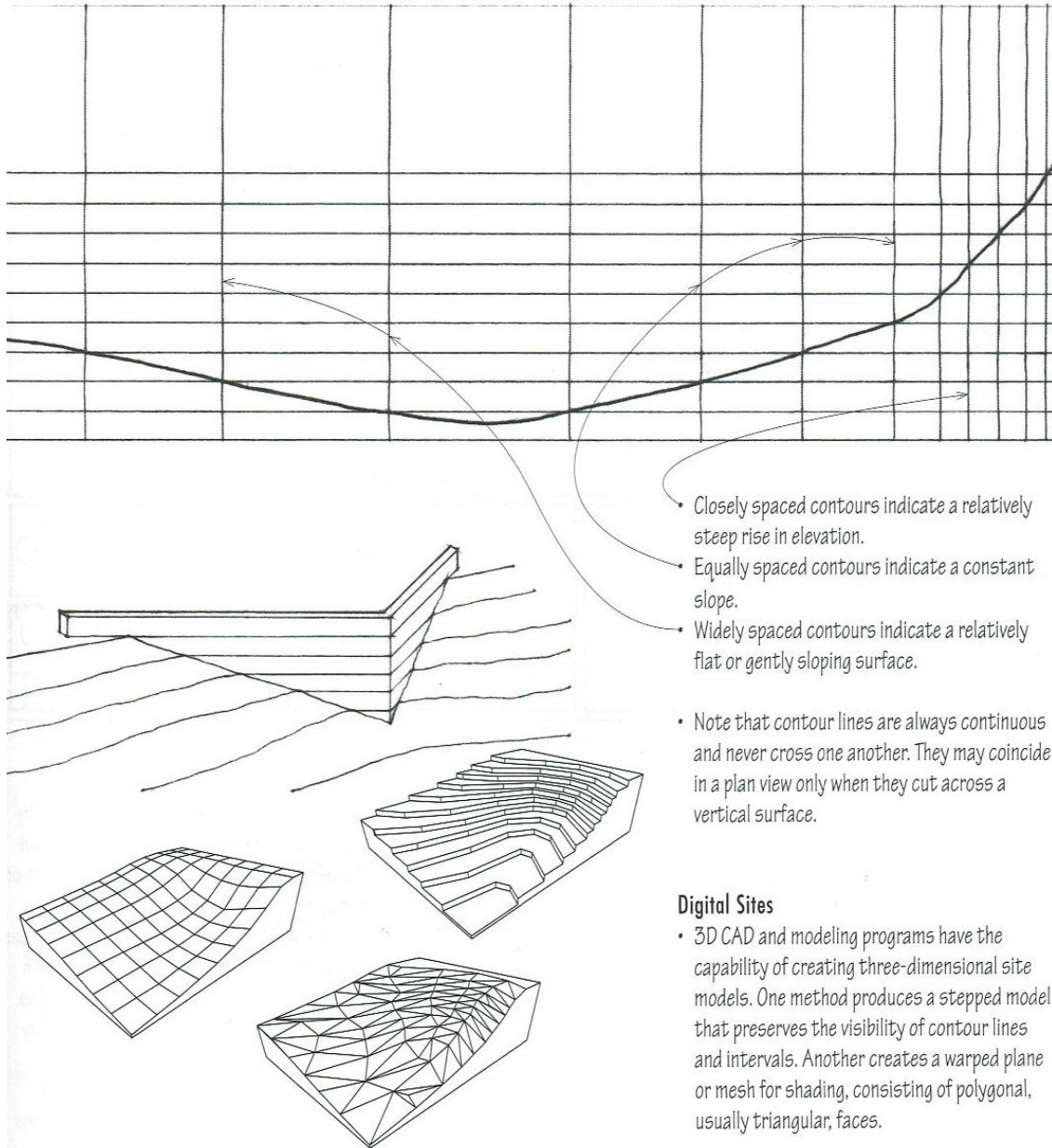
Are the contour lines close together indicating steep slopes or are they far apart, indicating a flatter terrain?



“How to read a Topographical Map.” How Stuff Works. By Debra Ronca. April 8, 2020.

<https://cdn.hswstatic.com/gif/how-to-read-topographic-map-2.jpg>

The horizontal distances between contour lines are a function of the slope of the ground surface. We can discern the topographical nature of a site by reading this horizontal spacing.



Pg. 65. "Site Topography" Francis D.K.Ching, *Architectural Graphics*, Wiley 6<sup>th</sup> Edition 2015  
 This book is highly recommended as a font of architectural graphic standards.

## Rules for drawing a contour system of your island based on your chosen ink blot:

- 1. Zero contour** is the sea level
- 2. Choose the highest points on the island**  
These are the hills, suggested by the darkest parts of the ink blot. Decide where ridges might fan out from the hill tops
- 3. Use your imagination as you look at the tones of the ink blot**  
White parts 'inside' the island land mass could be ponds or lakes: connect them by a stream to the sea.  
Start streams near your hills tops and then choose a route to the sea.
- 4. A contour is a loop**  
A contour joins all the parts of the island that are at the same level.  
ALL loops must be closed
- 5. Contours never cross each other** on a drawing *except in very special circumstances* i.e. when describing a cliff
- 6. Contour density indicates steepness of slope**  
Very few contours mean that it is an almost flat place.  
Equally spaced contours are showing a slope that drops or rises at a constant rate.  
If the contours get closer and closer together, the land is getting steeper and steeper.  
A cliff has contours lines *very* close together
- 7. Contour levels that describe a valley** are a series of symmetrical 'V' shape contours 'pointing' like arrowheads up the stream to the highest point
- 8. Choose a height for the constant contour interval on your drawing**  
In practice the contour interval may be 0.5m/1m/2m/5m/10m/100m etc  
We recommend that you use 20 or 50metre intervals for this exercise, preferably 50 metres
- 9.** When you have drawn all the contours, trace them very neatly and carefully.  
***Make every fifth contour line thicker, starting with sea level*** - this is called using line weights to make a drawing more readable.  
These line weights clarify information about size and quantity.
- 10.** Nominate two aspects for this drawing:

### **NORTH POINT**

Note: **There is a convention that the north point symbol points 'up' the page**

### **SCALE 1:10,000**

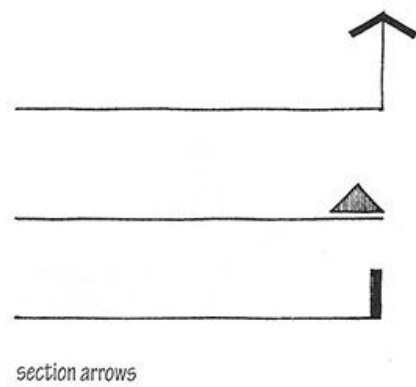
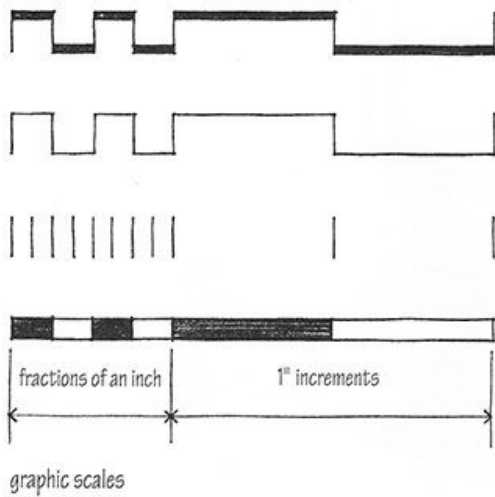
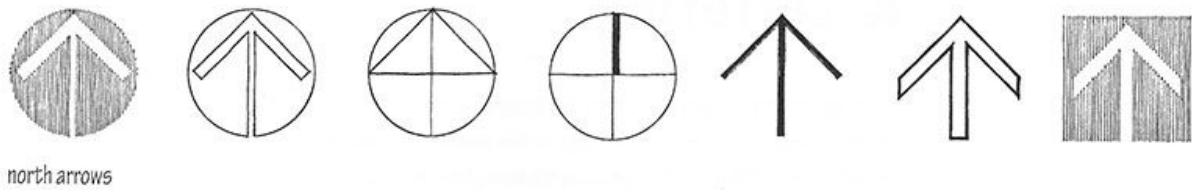
i.e. using your scale rule scale of 1:100, add two zeros so 20m = 2000m

**Clearly label your final contour plan drawing as a LOCATION PLAN**

Every drawing in architecture should have a clear label nominating its content and at which scale it is drawn.

Every Plan must have a clearly marked North Point and a scale.

Scale may be represented by a graphic scale line or a numerical nomination



**SITE PLAN**

**SCALE 1:200**

**LOCATION PLAN**

**Scale 1:10,000**

**Northern Elevation**

**Scale 1:50**

### 3. Render the contour plan in two different ways

Trace your island plan, together with all its contours, on to good quality paper, using a light box.

A window with strong backlight will work well.

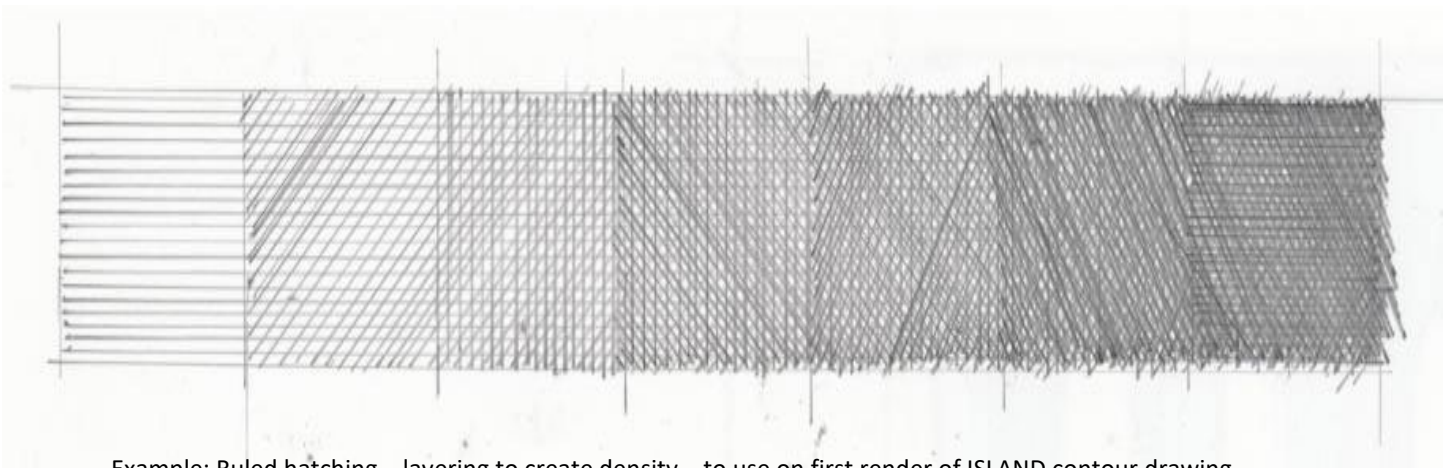
Tape the ink blot, covered by the drawing paper, to the window and carefully trace the island shape and contours from underneath.

#### First:

Use strictly *drafted* (use a ruler) hatching (use a ruler) – drawing fine lines close together - in layers, starting with a hatching across the entire island at 0m.

Add each layer in a different direction over the last layer so that the last contour, at the top of the hills, has all the layers of hatching and is therefore the darkest.

If you like, you can use line weights to improve the contrast between contour lines.



Example: Ruled hatching – layering to create density – to use on first render of ISLAND contour drawing

#### Second:

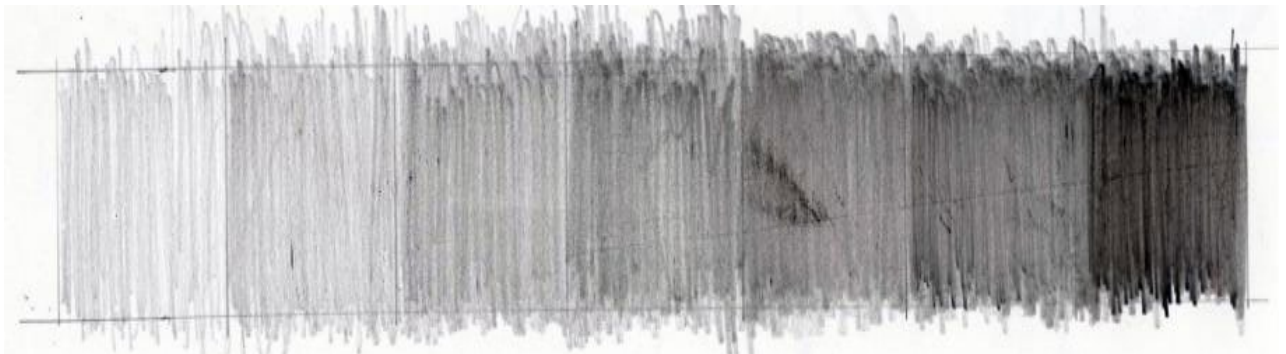
Use tone layers, building them up to finally get black at the top of the hills.

Your first layer is light and covers the whole island.

Using the same amount of tone shading move inside the next contour line and shade those areas.

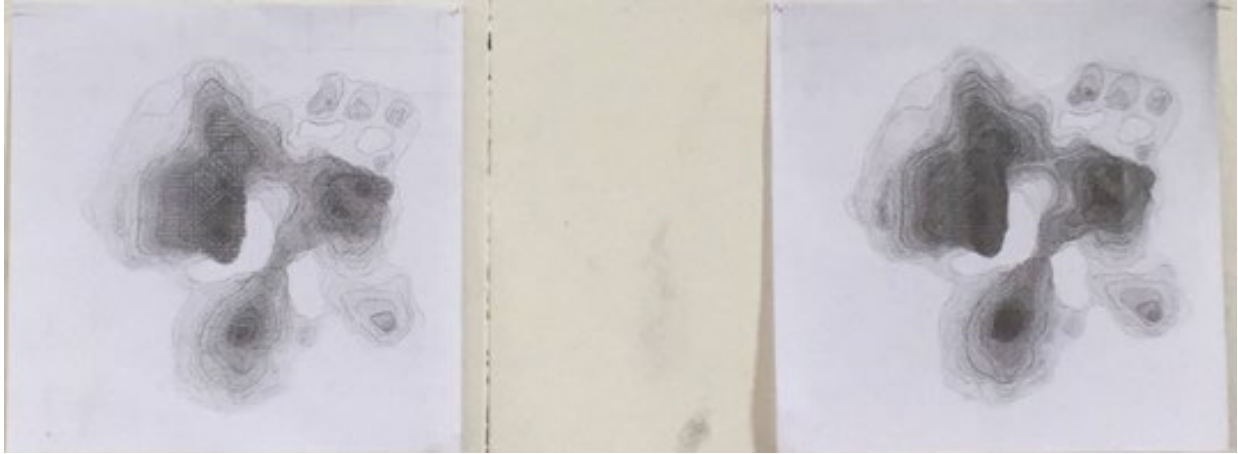
Continue until you are adding the last layer of shading to the hill tops.

Vary the lead softness to get a better effect using 2B – 8B pencils.

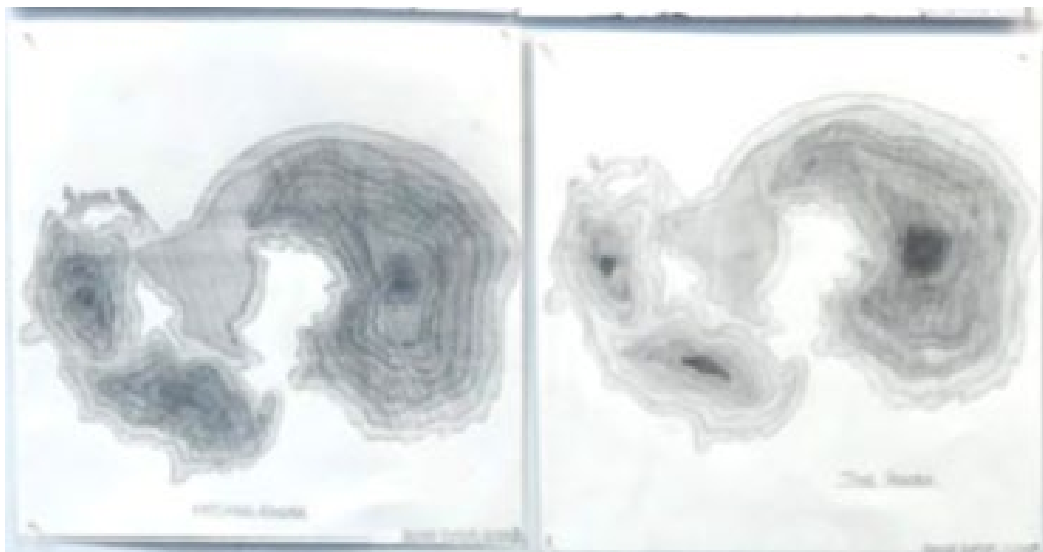


Example: Tonal shading – layering to create density – to use on second render of ISLAND contour drawing

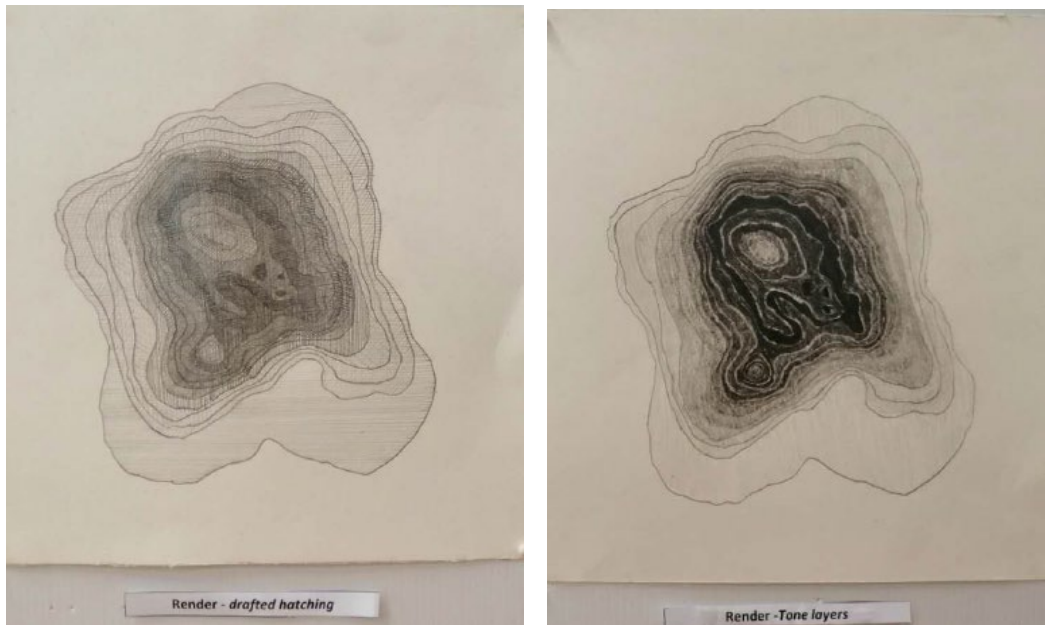




Student Exemplars (2): ISLAND contour plan rendered in two ways

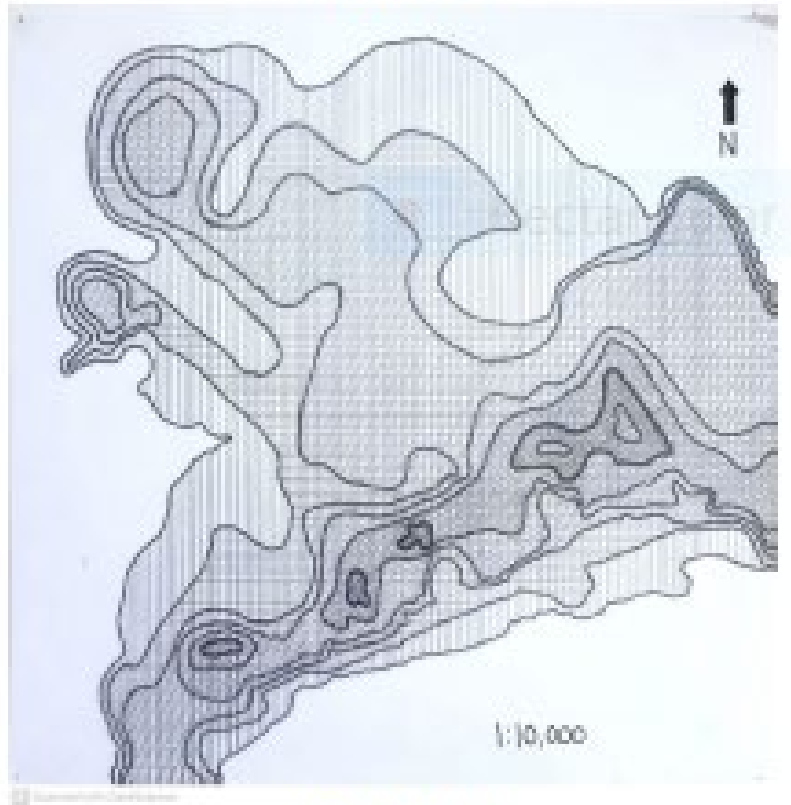


Student Exemplars (3): ISLAND contour plan rendered in two ways

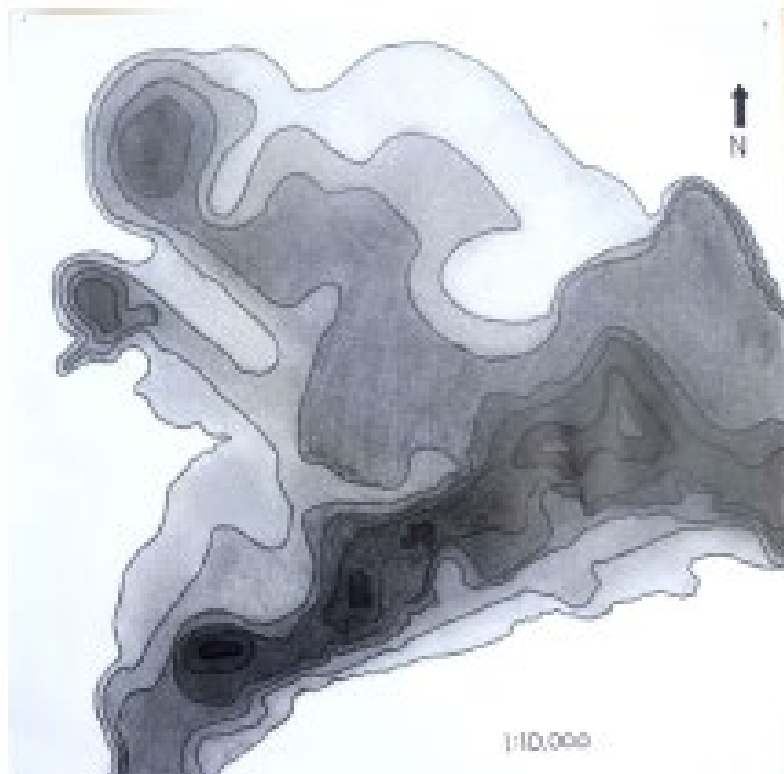


Student Exemplars (4): ISLAND contour plan rendered in two ways

Lined render



Shaded render



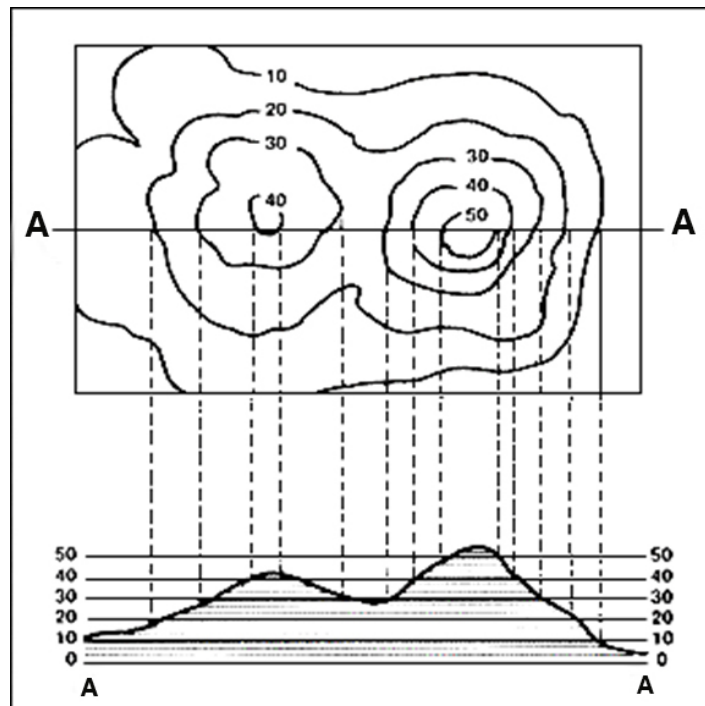
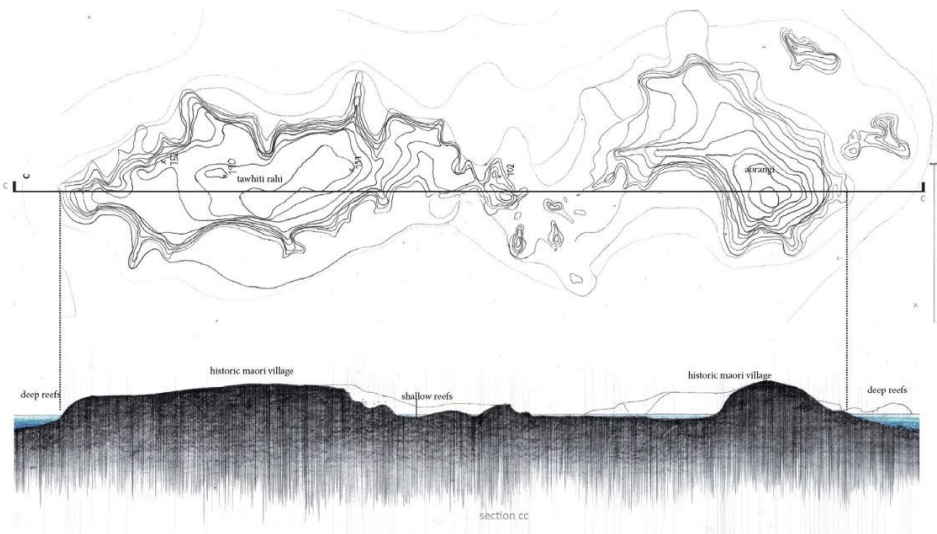
Student Exemplars (5): ISLAND contour plan rendered in two ways

**4. Make a 210mm x 210mm cardboard model of your island by assembling 42 sections of your island.**

**Draw vertical section lines through your contour plan at 5mm intervals.**

These are guidelines for you to then draw 42 sections through your **ISLAND**

Trace each of the sections onto 5mm foam board or corrugated cardboard. Cut out each section, taking care to maintain the order of the sections, then assemble and glue them together on a 210mm x 210mm base board of card.



"How do I construct a Topographical Profile."

The Math You Need When You Need It. Dr. Jennifer M. Wenner, Dr. Eric M. Baer

<https://serc.carleton.edu/mathyouneed/slope/topoprofile.html>

## 5. Photograph your 3-D Island model with 'sun rise' or 'setting sun' light

The light hits the hills on a low angle. You can simulate this with a lamp or a torch.

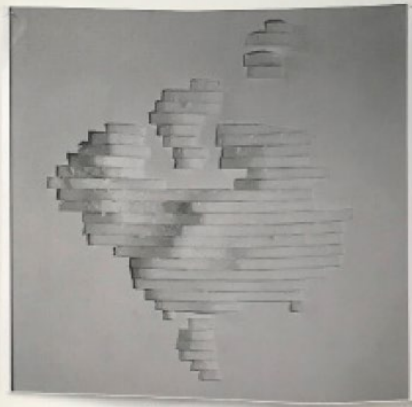
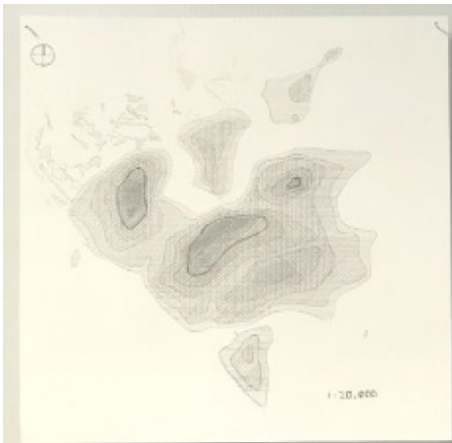
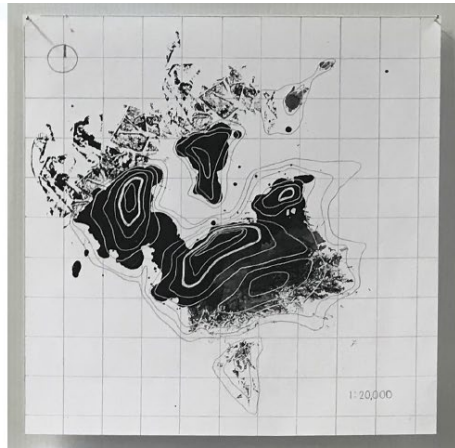
Change the North Point to get the best shadows to really help you see the shape of the contours.



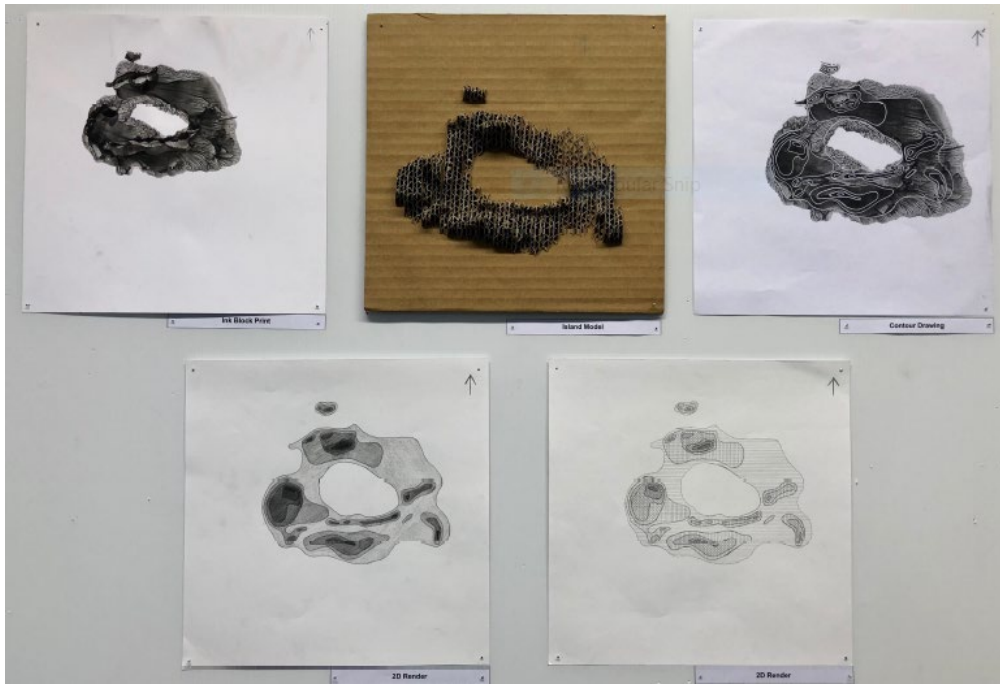
Student Exemplars (6): ISLAND Model 1:10,000 – two images with carefully lit sun studies



Student Exemplars (7): ISLAND Model 1:10,000 – two images with carefully lit sun studies



Student Exemplar (8): Final ISLAND OUTCOMES



Student Exemplar (9): Final ISLAND OUTCOMES



Student Exemplar (8): Final ISLAND OUTCOMES