

How To Do A Marine Metre² Survey

ROCKY SHORE

WHAT YOU WILL NEED

- **A square frame**
You can tie 4 x 1 m bamboo canes together, or use a 4 m length of rope with three knots tied on it at 1 m intervals that can be arranged into a square shape on the shore.
- **A 10 cm x 10 cm quadrat** (1% of your m²) e.g. a ice cream container lid works well.
- **A small ruler, a hand lens and a camera** are also useful.
- [A print out of this data sheet](#) and a pen or mobile access to [load your survey data online](#).

1. PLAN YOUR TRIP AT LOW TIDE

Tide times can be found by looking in the weather information section of a newspaper, or at metservice.com/marine/tides/index. Note: the tide levels change each day and often are lowest around the time of the new or full moon so you may not be able to find the same low shore level next time.

2. RECORD YOUR SURVEY SITE INFORMATION

- Randomly choose a position to lay your square down near the sea and record the shore level on the datasheet. **Never turn your back on breaking waves at the water's edge!**
- Take a photo of your metre square with the top of your datasheet in the corner so that you can compare the features of your sample area with others.
- Describe the location of the site, (e.g. name of the beach or a local landmark). This can also be done using a GPS function on your phone.
- Record the start time of your survey.
- Record key features of the site, (e.g. presence of a freshwater stream, evidence of human influences).

3. RECORD THE TYPE OF GROUND SURFACE (SUBSTRATE) IN YOUR SQUARE (E.G. REEF, BOULDER, ETC.) IN PERCENTAGES.

This should add up to 100 %. If sand is layered on top of the reef – record the upper surface (in this case sand). Remember you can use your 10 cm² quadrat (1% of your m²) to help figure out the cover of the substrate.

4. COUNT THE ANIMALS AND PLANTS IN YOUR SQUARE

- Measure the abundance of seaweeds using percentage cover. This is the percentage of the square that is covered by the seaweed when looking down. You can use your 10 cm² quadrat to help you.
- Start in one corner of your square and count the animals that you can see without moving any rocks or seaweed. Some small animals like barnacles can be found in very large numbers and it may not be possible to count all of these animals accurately inside your square. You can do a rough count in a small part of your square and scale this up using your 10cm² quadrat).

- Look for hidden animals on and under seaweeds, inside rocky crevices, and beneath small boulders. If you turn rocks over remember to return them gently to their original position.
Do not lift rocks that are larger than your head.
- If you find a species you cannot identify, write a description of it in the species list. If you can, take a photo of it with a ruler (if possible) in the shot to indicate its size. Write a brief description of where it was found and what it was doing. Email this information to marinemetresquared@gmail.com to help others to identify it later.

5. CREATE A 3D MODEL OF YOUR SURVEY SITE

If you'd like to capture a 3D model of your site so you and others can revisit it later, you can do a quick photogrammetry survey using your phone. Once you've downloaded the app it only takes around 10 minutes. [Find out how here.](#)

6. SHARE YOUR FINDINGS

Log your findings in the Marine Metre² database at mm2.net.nz so that you and others can track how the seashore is changing over time.