

GREAT SOUTHERN REEF: FIELDWORK GUIDE

This document contains suggestions for completing on-site fieldwork on the Great Southern Reef.

Completing the Virtual Fieldwork activity on the Great Southern Reef will provide a comparative study and ideas as to the types of activities students could complete to gather data at a local location.

1. Choose a site

The GSR runs the length of the NSW coastline and beyond. Any location with a headland beach that has adjacent areas of rocky reef would be suitable. It is worth checking with locals e.g., local surf club, to find a beach that regularly had seaweed deposited on shore after a storm.

Contact coastal Environmental Education Centres, fieldwork providers or science facilities near you for assistance in organising a fieldwork activity or for suggestions on locations.

2. Complete Pre fieldwork activities. These could include mapping activities and video clips such as drone or underwater film on your local beach to provide background information.

3. On site activities

- **Measure abiotic components of the environment** – water temperature (thermometer), wind speed and direction (anemometer and compass), wave period (stopwatch), turbidity (turbidity tube), salinity (refractometer), pH (pH metre) and beach gradient. Include water depth near rocks where appropriate. Compare data to typical conditions for kelp growth and to the Virtual Fieldwork site.
- **Examine biotic components of the environment**
Conduct a Weed Walk to **observe and collect** samples of Beach Wrack. Use:
 - **Identification charts** to determine types of kelp and other marine organisms
 - **Quadrats** at several locations to calculate the % of different algae and seaweed
 - **Transects** to identify changes in wrack from the shoreline to back of the beach
 - **Sieves** to sort decomposed organisms.
- **Make observations of human impacts and management**
 - evidence of human impacts e.g., pollution, litter, micro-plastics (use your sieves), oil slicks, stormwater outlets, discarded fishing gear etc
 - evidence of management e.g., education signs, warning signs

4. Options

- *Snorkelling*
- *Guest speakers* e.g., Marine Park managers, marine scientist (e.g., SIMS - Sydney), local divers club,