



CURRUMBIN ROCKY SHORE STUDY 'IDENTIFYING ZONES'

(For safety reasons this study should be conducted at low tide)

INTRODUCTION

The rocky shore is a common type of environment throughout the world. It has been formed by a number of forces acting on the rock throughout the ages. Some of these include rises and falls in sea level, ice ages, wind and sand erosion. In recent times cyclones and wave action have played their part in splitting the rock and creating cracks and pools. The result has been diversity in rock shape which has created mini habitats called MICROHABITATS, in which animals and plants can live.

The most significant factor of this environment is the activity of the sea; in particular, (a) the rising and falling of the tide and (b) the pounding action of the waves. The animals that live in this environment have a range of clever adaptations for dealing with the constantly changing conditions.

Because the conditions are very different depending on the distance from high tide mark the rocky shore is often broken up into zones. There is a set of organisms that have adapted in a particular way to each zone and they are almost exclusive, although some organisms are versatile enough to overlap from one zone into the next.

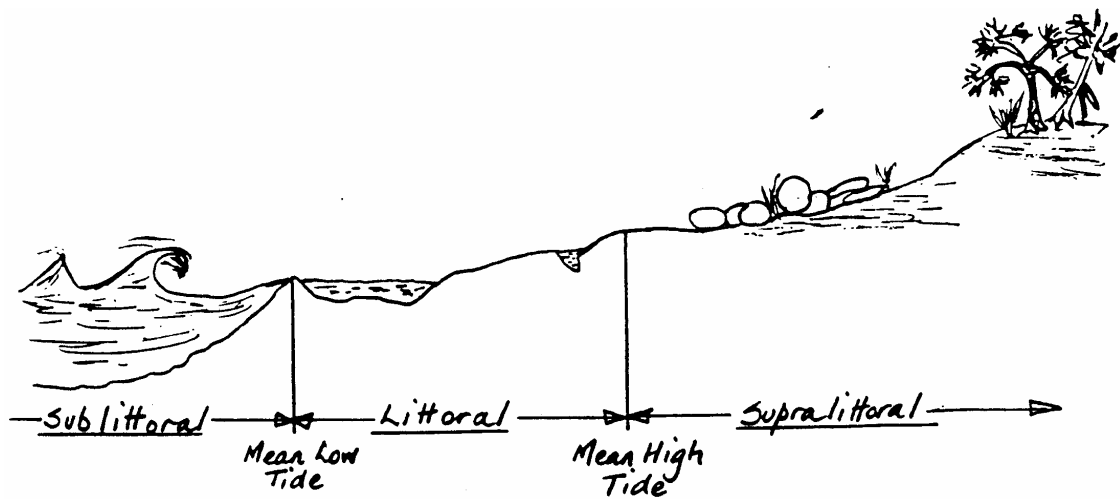


The rocky shore will fall roughly into the following zones:

Above High tide mark i) Supralittoral Zone

↓ ii) Littoral Zone

Below Low tide mark iii) Sublittoral Zone



AIMS

- Identify and give the common names of much of the animal and plant life found on the rocky shore
- Identify about 4 different types of MICROHABITATS
- List the adaptations of these animals and plants to their rocky shore environment

EQUIPMENT

- Sunscreen and Hat
- Mosquito repellent
- Water Bottle
- Clipboard folder
- Notepad, pen and pencil
- Ruler and eraser
- Graph paper for transect
- 10 metre string (marked at 1m intervals)
- Thermometer
- Light meter
- Magnifying lens
- Books to help identify rocky shore species



PROCEDURE

In small groups carry out the following tasks:

Recommended group size is 4 - Recorder (see table 1)

- Collector (be sure to return all specimens to their precise habitat if you move them)
- Identifier (carry plant and animal ID sheets)
- Selector and marker of areas - counter

1. Select a total of 3 one metre square plots in succession. The first at high tide mark, the second at the middle of the tidal region and the third as close to the water as possible (depending on conditions, you may have to venture into the water)
2. Observe and identify all organisms in the plot, being careful to investigate areas such as the crevices and underneath rocks
3. Count or estimate the numbers of individuals in each species
4. Note the MICROHABITAT of each species; e.g. anemone – under a rock crevice
5. For each species comment on any obvious adaptations you observe. Try and classify the species to phylum level and then do a simple biological drawing.
6. All observations and drawings should be placed neatly in Table 1



TABLE 1

TASK	ZONE 1 (High tide mark)	ZONE 2 (Mid-tide region)	ZONE 3 (Low tide mark)
ORGANISMS	1 2 3 4		
NUMBER OF ORGANISMS	1 2 3 4		
PRECISE HABITAT	1 2 3 4		
OBVIOUS ADAPTATIONS	1 2 3 4		
DRAWING	1 2 3 4		

