



## **BREEF Teacher Training Workshop**

### **Lesson Title** My Square Meter

### **Lesson Purpose /Rationale:**

At first glance a rocky shore appears to be a barren area devoid of life, but this is far from the truth. As we take a closer look we can observe a great variety of life forms that are adapted to life in this harsh environment. For plants and animals to survive in this habitat they must be able to withstand wave action, tolerate dry and hot periods, high temperatures and changes in salinity. During this activity students will take a closer look at life on the shore and describe the adaptations of the organisms for survival.

### **Objectives:**

At the end of the lesson students will be able to:

1. name four organisms found on a rocky shore
2. describe their adaptations that allow them to survive on a rocky shore
3. describe some of the challenges that these organisms face in this environment

**Resources:** Make a complete list of all materials include quantities, resources, websites etc.

water glass, clipboard, pencil, square meter frame, field guide

Pre field trip activity

Make square metre quadrats – one per group

### **Field Trip**

1. Discuss zonation of the shoreline so that students are able to identify each zone
2. Divide students into groups, discuss safety (rocks are slippery, no rough play), students should be advised to work quietly and to treat the organisms with respect
3. Each group will make observations at each of the 2 sites
  - Site 1 – in the permanently wet zone (select a patchy area)
  - Site 2 – in the intermittently wet zone
4. At each site students must carefully place or hold the square meter above the area, and use the water glass to observe the organisms within the quadrat. Using the field guide students must identify 4 organisms of their choice and complete the worksheet provided.

### **Post field trip:**

Discuss the following with students;

1. What types of organisms are found in sites 1 & 2?
2. Do any differences exist between the types of organisms found at sites 1 & 2?
3. What colour were the organisms at each site? Could this colouration help them survive on the rocky shore? If so why?
4. How are the organisms designed to deal with the movement of the waves on and off shore?
5. How are the organisms adapted to protect themselves from predators during low tide?

Extension;

The information collected can be used to make organism ID cards. Students can make a set of picture cards and a set of adaptations cards. Then can use the cards to play a rocky shore matching game. Students may also wish to make cards of other organisms to test general knowledge eg cacti – succulent stems store water for life in a dry habitat, polar bear – white fur to camouflage so that they can sneak up on prey etc.

## OUR OBSERVATIONS OF ROCKY SHORE ORGANISMS

### SITE 1: Permanently Wet Zone

Feature	Organism 1	Organism 2	Organism 3	Organism 4
<b>Name</b>				
<b>Drawing</b>				
<b>Shape</b>				
<b>Colour</b>				
<p style="text-align: center;"><b>Movement</b></p> <p>Is it stationary or does it move? Describe how it is held in place or how it moves</p>				
<p style="text-align: center;"><b>Special Features</b></p> <p>Describe any special features e.g. ridges, spines, tentacles etc</p>				

## OUR OBSERVATIONS OF ROCKY SHORE ORGANISMS

### SITE 2: Intermittently Wet Zone

Feature	Organism 1	Organism 2	Organism 3	Organism 4
<b>Name</b>				
<b>Drawing</b>				
<b>Shape</b>				
<b>Colour</b>				
<p style="text-align: center;"><b>Movement</b></p> <p>Is it stationary or does it move? Describe how it is held in place or how it moves</p>				
<p style="text-align: center;"><b>Special Features</b></p> <p>Describe any special features e.g. ridges, spines, tentacles etc</p>				

