

Changing Ocean Program

Data Collection Booklet



JACOBS WELL
ENVIRONMENTAL
EDUCATION CENTRE

The Marine environment contains an abundance of life. The vast majority of organisms start their lives as plankton. Plankton can be described as organisms that cannot “swim” against currents therefore they are at the mercy of the oceans tidal and wind generated currents. Plankton tend to be small but some may be as large as eight meters in length, such as the Lion’s Mane Jellyfish. Plankton can be classified into Zoo-plankton (Animal-plankton) and Phytoplankton (Plant plankton). Organisms that spend their entire lifecycle floating through the oceans as plankton are called Holoplankton (Plankton for the whole of their lives). Whereas the organisms that develop into larger organisms and leave the plankton to walk on the ocean floor, swim freely through the oceans or settle and grow on the ocean floor are called Meroplankton (Merely plankton for part of their lifecycle).

Some examples of Meroplankton that will settle out of oceanic plankton are sessile sponges, barnacles, bryozoans and other forms of motile invertebrates. Vertebrates such as fish larvae will also leave the Meroplankton to become part of the Nekton. Algae can also settle out of the Meroplankton and take hold of hard structures and substrates found in the marine environment.

The settlement of planktonic organisms onto hard, uninhabited substrate is a vital step towards supporting biodiversity within the ocean environment. These pioneering plankton species biologically enhance regions within the ocean and encourage other species to reside on or near the settled substrate through the provision of resources.

This investigation will use a submersible device that was developed by NOAA and the Smithsonian Institute called the Autonomous Reef Monitoring Structure (ARMS) to evaluate two physically different marine environments.

European Nature Information System (EUNIS) Habitat Classification

Students are to evaluate and classify the habitats at sites 1 & 2 using the EUNIS Habitat Classification for Marine Habitat Types publication.

Subsequent to evaluating and classifying the habitat at each site, complete the statements below:-

Site 1. Name: _____ is a ...
_____ habitat.

It can be classified with the EUNIS Habitat code: _____.

Site 2. Name: _____ is a ...
_____ habitat.

It can be classified with the EUNIS Habitat code: _____.



Site Name: _____

Plate # _____

Type of Organism	Topside	Underside																																																																																																																
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Single point abiotic data collection results:

Abiotic Factor	Site Name _____	Site Name _____
Date		
Time		
Tide Height and Time		
Air Temperature (°c)		
Water Temperature (°c)		
pH		
Turbidity (cm)		
Wind speed/direction (Km/h)		
Dissolved Oxygen (% sat.)		
Salinity (ppt)		
Water current speed (Km/h)		
Water Carbonate content (ppm)		

Notes:
