Research Methods

Guiding light – the floating classroom

Author: Dr Rupert Perkins

Figure 1: Students commencing a coastal reconnaissance on-board RV Guiding Light

Introduction

Getting afloat is one of the best student learning experiences there is. To experience the beauty and power of the sea first hand and to think about the related marine issues from sea level rise through coastal erosion and management is an opportunity not to be missed. This is where the vessel Guiding Light (GL) comes in!

Guiding Light is a 15m research vessel equipped to investigate many aspects of the marine environment from the sea floor to the clouds. GL carries on-board the latest sonar sea floor imaging sonar suite and an array of probes and other instruments which allow the investigation of temperature, salinity and other vital elements which help to gain an understanding of the seas. In addition to this, she also provides a floating platform from which visual observations of the sea and coast can be made. Cliff erosion, or a pollution incident for example is often best viewed from the sea.

GL is used to support student learning by undertaking a variety of day cruises, usually on the Bristol Channel from her base in Penarth marina. Typically students will undertake a variety of tasks from mapping the sea floor to identifying cloud types while at the same time getting experience of life on-board a small vessel. Where possible the same sites are visited so that a record can be created through time of the same section of the sea. This helps to build a picture and can contribute to our understanding of how the sea and coasts change with time.

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Figure 2: Students preparing to deploy an underwater sonar calibration plate

Figure 3: Students recovering a seabed sediment grab

Students are taught to use the hydrographic sonars in order to map the sea floor, showing where the deep channel and shallows are and can even show features such as sand waves, wrecks and bed rock type. Much of this information is vital to large ships navigating the Bristol Channel and can be directly related to the buoys seen from the vessel. A day at sea provides much data and information, which is processed ashore in lab sessions and really brings much of the work alive.

For many, a day on Guiding Light provides the inspiration for so many things including a career afloat as a hydrographic surveyor which is the preferred path for a number of Geography students. Potential employers recognise the unique practical, technical and transferable skills that students acquire during these cruises.

Further information

- Should you or your school like to take part in a day afloat on Guiding Light, or if you'd like to know more of what we do, then please contact Ian Fryett, the skipper of Guiding Light, email: fryetti@cardiff.ac.uk, tel. 02920 876130.