

Teachers Worksheet

Lepe Country Park, Hampshire

Geological Site of Special Scientific Interest (SSSI)

Preserved in the cliffs and foreshore at Lepe Country Park, Hampshire is a record of past environments spanning c. 200,000 to 30,000 years ago. A separate guide available from the Park Office outlines this geology. This worksheet suggests two activities that you might like to undertake with your students with equipment available from the Park Office and funded by the Quaternary Research Association (QRA) as part of their Outreach activities. Information about how these practical exercises can be used to support geography and geology specifications is available in the outreach section of the QRA website (www.qra.org.uk).

1. Cliff activity

The aim of this activity is to get students identifying different rock types from the upper gravel and then speculating about where they have travelled from.

A rock identification guide is also available from the Park Office.

Actions:

- Take a small sample of gravel from the cliffs
- Sieve the gravel through a set of three sieves (8, 16 and 32 mm), preferably using water (using the tap alongside the café)
- Look at the 16-32 mm fraction using hand lenses and see if you can spot which rock types are represented (see Rock ID sheets and Figure 9 of the Lepe geology guide)
- Look at the geological map in Figure 9 of the Lepe geology guide and see where your rock types came from

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2. Beach augering activity

The aim of this activity is to get students to describe the sediments from the clay channel and look at the fossil snail shells. Using a snail identification book (or pages from it), students can work out what the environment was like when these snails were living at the site. (Snail identification books are available in the Park Office.)

Actions:

- Remove beach material from the top of the clay sediments with a spade
- Push a gouge auger through the clays in one metre increments, taking the sediments out using a sharp knife and placing them to one side (on a groundsheet or something similar)
- Split the sediments into similar 'beds'
- Describe each bed under the following headings:
 - particle size – clays (smooth when fingers rubbed together) / silts (slightly gritty when rubbed between fingers)
 - colour
 - amount of organic material
 - presence / absence of shells
- Sieve any shelly beds through a 0.5 mm sieve, preferably using water (using the tap alongside the café)
- Look at the fossil snail shells using hand lenses and see if you can link them to the snails in the guide. Species that you are expecting to find are: *Hydrobia ventrosa*, *Hydrobia ulvae*, *Ovatella myosotis*, *Cerastoderma edule*, *Scrobicularia plana* and *Abra* spp.
- Compare the environments preferred by the fossil snails with those seen currently at the site.

Dr Becky Briant

School of Geography, Birkbeck College,
University of London, Malet Street, London, WC1E 7HX.

Email: b.briant@bbk.ac.uk