



Science, Geology and Geography

# 'Geo-Rock' - Digital geology and the rock cycle

A new, exciting, multimedia science project for secondary schools

A number of sessions are available please ring for dates

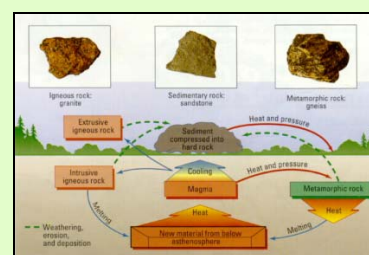
The **Geo-Rock** workshop comprises:

**The Rock Cycle**- illustrated presentation reviewing the common characteristics of sedimentary, metamorphic and igneous rocks, their classification and the rock cycle

**Microscope Skills** – hands-on session - how to use a scientific microscope, capture and save images. Examination of thin rock sections\* to compare and contrast their characteristics

**Kar2ouche** – importing saved rock section images to illustrate and answer questions about the rock cycle

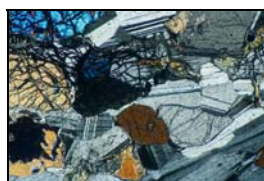
**Resources** - CD ROM containing digital images of rock sections and exported Quicktime movie files



Depending on where you live in the UK the rocks beneath your feet will be quite different. They formed at different times and in very different environments and every rock contains clues about the environment in which it formed. Most of the earth's major events, such as volcanic eruptions, glaciations, mountain building, weathering, erosion and earthquakes all involve rocks and minerals. The rocks of the earth are constantly being transformed into new types and recycled by a number of processes which together make up the *rock cycle*.

Students will use digital scientific microscopes (16 Philip Harris Advanced Digital Microscopes) to examine thin rock sections\* under magnification and with polarising filters. The thin rock section\* sets have been specially commissioned by the learning lighthouse from GeoSec Slides. Each set consists of 32 different igneous, metamorphic and sedimentary rocks. ([www.geosecslides.co.uk](http://www.geosecslides.co.uk))

Magnified images will be saved, imported into the Earth Sciences Kar2ouche title and used to illustrate and answer questions about the rock cycle. Finished work will be exported as Quicktime movie files.



*\*What is a thin rock section?  
It is a slip of rock, mounted on a glass microscope slide, and ground very thin. 30 Microns is the ideal thickness. (A standard piece of paper is 100 microns thick). At this thickness virtually all rocks are transparent, and the individual minerals that make up the rock can be seen and identified. When viewed through a polarising filter interference colours can be seen, a similar effect to oil on water. This too, is used as an aid to identification of minerals in the rock section.*

This workshop has been designed to review and enhance study of the rock cycle. Prior to attending a workshop you will need to have studied the rock cycle with your students.

This half day workshop is suitable for Key Stage 3 & 4 students.

To book your class on this free workshop please contact:

the learning lighthouse  
city learning centre

0151 678 2509

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