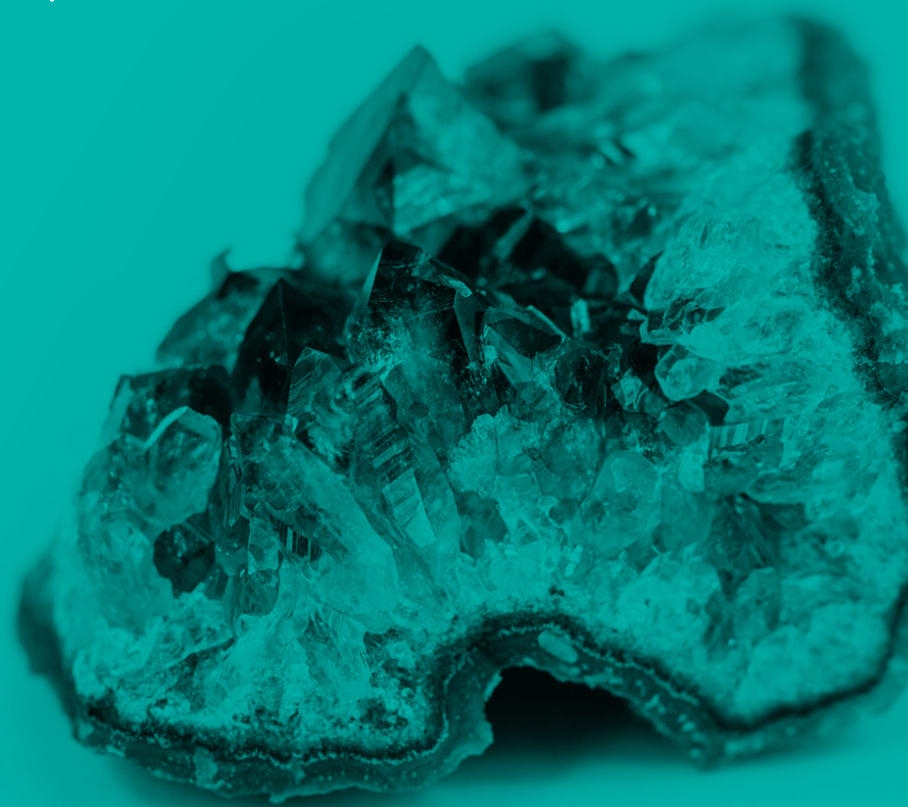# GCE AS

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WJEC Eduqas GCE AS in
GEOLOGY

P7
Use of photomicrographs to identify minerals and rock textures of sedimentary rocks in order to identify rock types and to deduce their environment of deposition

Title: P7 Use of photomicrographs to identify minerals and rock textures of sedimentary rocks in order to identify rock types and to deduce their environment of deposition

Specification reference: 2.1.e

Aim: To use photomicrographs to identify minerals and rock textures of sedimentary rocks in order to identify rock types and to deduce their environment of deposition.

Apparatus:
Photomicrographs or drawings of photomicrographs of a range of sedimentary rocks
Ruler
Mineral data sheet.

Method:
1. Select a photomicrograph of a sedimentary rock.
2. Describe the texture of the rock:
   - clastic/fragmental/granular
   - grain size (s)
   - grain shape
   - the degree of sorting of the grains.
3. Describe features of the composition of the rock:
   - identify the minerals within the rock
   - identify the composition of the cement.

Analysis:
1. Identify the name of the rock using the textural and compositional characteristics.
2. Refer to appropriate sources of information e.g. AS notes, internet sources to determine the environment of formation of the rock using the evidence of mineralogy and texture.

Teacher/Technician notes:
If petrological microscopes are available learners could be provided with thin sections of a variety of rock types which could be drawn and annotated.
Alternatively learners could draw and annotate images of thin sections using internet sources or learners could be provided with copies of images for annotation.
Websites containing thin section images of a variety of rocks include:

http://www.earthscienceeducation.com/virtual_rock_kit/DOUBLE%20CLICK%20TO%20START.htm

https://wwwf.imperial.ac.uk/earthscienceandengineering/rocklibrary/identify.php?itype=4&istep=1

Images should be selected to cover the suggested list of sedimentary rocks in section 2.1e of the specification.