
WORKSHOP 5

Investigating the Engineering Geology of Ecton

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| The activity in brief | | Observations of rock characteristics are made in the field and the likely “stand-up time” for an unsupported mine tunnel are calculated. |
| Suitable for | WJEC | AS GL 3 - geological factors in civil engineering – simple investigation into the different geotechnical properties ... of differing rocks (p 25) |
| | OCR | A2 F794, Module 4 – geological factors affecting the construction of tunnels (p 38) |
| Suitable for teaching/assessing investigative skills | | <ul style="list-style-type: none"> • Implementing • Analysing evidence & drawing conclusions • Evaluating evidence and procedures |
| Topic addressed | | Methods of conducting engineering geology investigations |
| Student practical or teacher demonstration? | | Ecton Tutor-led sampling of data and follow up. |
| Time needed to complete activity | | 2 hours. (Introduction at Centre 20 minutes, Investigations at Apes Tor 40 min: Walking time 30 min: Follow up 30 min.) |

Resource list

Download and print at school before workshop:

- *GW5 SS1: investigating the Engineering Geology of Ecton.*

For The Salt's Level visit:

- *GW IS6(C6): Salt's Level Base Map*

should be issued to students and Teacher should download:

- *GW IS7(C7): Salt's Level Geological Details*

but withhold it until after the Salt's Level visit.

Teacher may wish to download:

- *GW IS1: Assessing Investigational Work for OCR Geology*

Other items are provided by Ecton Centre.

Ideas for introducing/leading into activity

Students should be prepared for the visit by studying the student sheets in advance so that they are familiar with the layout of Ecton Hill and the mine.

The Student Sheets look daunting!

It will suffice if students skim-read them but ensure that they know the meaning of the terms: dip, strike, bedding plane, joint, fault and groundwater. Everything else will become clear at Ecton.

Ideas for following up the activity

Discussion at Centre; Salt's Level visit, both led by Ecton Tutor.

Preparation and set-up time:

10 minutes



Fig 5.1 Using a Schmidt hammer at Apes Tor



Fig 5.2. Underground in Salt's Level