



North York Moors National Park Education Service
Activities for KS 3 and above

Moorlands as Indicators of Climate Change (The MICCI Project)

A great opportunity for pupils to participate in fieldwork and use sampling techniques to collect data as part of a national project relating to the impacts of people on the environment and climate change.

Pupils collect data about the moorland environment and the condition of the peat including: altitude, aspect, gradient, soil depth, water table depth, soil pH, soil temperature, air temperature and sample vegetation cover using quadrats. All equipment and recording sheets provided.

Similar fieldwork is being carried out by schools in other UK National Parks as part of an on-going national research project initiated in the Peak District National Park with Manchester University. On-going monitoring of the condition of our peatlands is vital to inform land management practices in the face of predicted changes in climate.

Also includes an optional indoor illustrated talk, up to an hour, on how and why the uplands of the North York Moors are managed, the wide ranging impacts of managing a moor for grouse shooting and using peatlands to mitigate for climate change.

Free teachers' resource pack provided with information and worksheets about the role of peat in climate change and flooding and the wide ranging impacts of managing an upland environment for grouse shooting.

Optional extension activities: Data collected by other schools will be available for students to analyse to assess the condition of the peat in other National Parks across Britain.

Location: Starting and finishing at The Moors National Park Centre at Danby. Various sites can be used within walking distance or a short drive from the visitor centre.

When available: September to March only (to avoid disturbance to ground nesting birds on the moor), ideally in March to tie in with the national MICCI project and National Science Week.

Duration: 2 hours for the fieldwork plus 1hour for the optional indoor talk, plus your lunch break.

Maximum group size: 60

Your transport: May be needed to take pupils to fieldwork site to reduce walk in time.

Curriculum links for geography and science - see below





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Curriculum Links for Geography and Science		
Specific learning objectives will be discussed with you on booking.		
Level / Spec	Science	Geography
KS3 / 4	<p>Fieldwork techniques;</p> <p>Earth and atmosphere - the production of carbon dioxide by human activity and the impact on climate change, potential effects of and mitigation of increased levels of carbon dioxide on the Earth's climate;</p> <p>Ecosystems – positive and negative human interactions with ecosystems</p>	<p>Human and physical geography - understanding how human and physical processes interact to influence and change landscapes, environments and the climate</p> <p>Geographical skills and fieldwork – using OS maps, using fieldwork techniques</p>
GCSE (AQA)	<p>Land use – destruction of peat bogs / the need to conserve peat bogs and peatlands as habitats for biodiversity and to reduce carbon dioxide emissions.</p> <p>Maintaining biodiversity - protection and regeneration of rare habitats;</p> <p>Chemistry of the atmosphere - Human activities which contribute to an increase in greenhouse gases in the atmosphere, the carbon footprint and its reduction.</p>	<p>Climate change, mitigation and adaptation.</p> <p>Issue evaluation eg. Impacts of managing an upland environment for grouse shooting</p> <p>Fieldwork for a geographical enquiry.</p>
GCSE (Edexcel)	<p>Earth and atmospheric science – the greenhouse effect, the potential effects on the climate of increased levels of carbon dioxide generated by human activity, that these effects may be mitigated eg. peat bogs as a carbon sink.</p> <p>Ecosystems – positive and negative human interactions with ecosystems.</p>	<p>Hazardous Earth /Climate change / How human activities produce greenhouse gases that cause the enhanced greenhouse effect leading to global warming;</p> <p>The UK's evolving physical landscape - why distinctive landscapes result from human activity.</p>

Ideas for extending learning before and after this activity

See 'Investigating Moorland' in the 'KS3 and above' resources section on our website - includes worksheets and factsheets on the wide ranging impacts of managing an upland environment for grouse shooting.

Find out more about moorland at: <http://www.northyorkmoors.org.uk/discover/moorland>