Regional Environmental Diversity across the UK

1. Module Leader

Lis Rushworth

**Biography.** Lis Rushworth teaches a range of geosciences and has been involved in geoarchaeological and scholarship research since starting her PhD at the University of Liverpool in 2008. With 15 years expertise in industrial speciality chemicals research and manufacturing prior to her appointment at the University of Liverpool, she actively promotes cross-disciplinary working practices. Lis has developed her knowledge and understanding of how the geology and physical geography of an environment affect factors such as resource availability, topography and vegetation, and why they influence the way we use our environment. She is keen to share this with students on the International Summer School at the University of Liverpool, and help them to expand their understanding of how the natural physical environment influences the locations and development of our towns and cities.

2. Module Description

In ancient times our access to food, water and safety influenced where our early ancestors chose to live. More recently the natural environment influences the location of our towns and cities and their economic and political development. This module focuses on key aspects of geology and physical geography and how they influence the location and development of important towns and cities. In particular the climate, topography, vegetation, geology and access to essential resources such as water and geological materials. The module focusses on case studies in the UK and why those settlements differ regionally. Seminars will provide the background to the projects and skills needed during the projects and workshops will provide the opportunity to develop skills and knowledge through independent research for sharing with different audiences.
3. Module Aims
This module aims to:

- Use active learning approaches to develop an understanding of how local geology and physical geography influence the location and development of our towns and cities
- Reflect upon the lessons learned about the importance the natural environment has on the built environment, illustrated with examples from across the UK
- Develop confidence in understanding and communicating cross-disciplinary ideas in different formats to diverse audiences
- Improve skills in research and collaborative learning

4. Content
The following topics will be considered on the module:

- The regional diversity of geology and physical geography in the UK
- How geology and physical geography influences our use of the landscape
- The development of the towns and cities in the UK in the context of their natural environments
- The development of the City of Liverpool
- Production of information brochures summarising multiple strands of information
- Production and presentation of e-posters demonstrating contrasting case studies

5. Module Structure
The module will be delivered over a three week period in two weekly sessions. The first session in each week (2 hours) will take the form of an introduction to the theme of the week and a briefing seminar. The second session in each week (4 to 6 hours) will involve either a visit to a theme related location or an interactive workshop to gains skills and formative feedback on the assessments. The module leader will act as facilitator and graduate students with expertise in the study areas will support the teaching.

In addition, it is expected that students will spend up to 26 study hours outside of classroom contact hours on activities including assigned reading, optional reading in areas of personal interest, homework tasks, web research and preparation for assessments and upcoming seminars.

6. Teaching Methods
The teaching approach will include the following:

- Seminars
- Outside study visits
- Workshops

7. Assessment
Assessment will be by:

Task 1: Tourist guide with post tour quiz (Individual assessment 50% of the overall mark)
Task 2: Group e-poster presentation (Group assessment 50% of the overall mark)
Standard University policies apply with regard to late submission of assessments. There is no re-assessment opportunity.

8. Course Structure

The indicative schedule is as follows:

**Week 1:**

**Session 1: Seminar**

Introduction to the module aims, structure and the assessments. Framing the problem: Introduction to the geology and physical geography of the UK and why towns and cities are developed in certain locations. An introduction to the key skills used in data gathering and producing considered analysis will be discussed.

**Session 2: Workshop**

Working together we will explore the important environmental factors in settlement location and development of several contrasting case studies across the UK. Using google earth, topographic maps and the Geology of Britain we will identify key natural environmental factors in settlement development at the case study locations and use concept maps to summarise our findings. We will then work in small groups using example landscapes to suggest ideal settlement locations, then share the information between groups, producing student-led formative feedback on the concept maps and settlement location maps.

**Week 2:**

**Session 3: Seminar**

Focussing on Liverpool, we will examine in detail how its infrastructure and political and economic development was influenced by the natural environment, and in particular the physical geography, of the greater Merseyside area. We will then compare this to similar and contrasting cities in the UK. An introduction to creating a tourist guide and quiz style questions will be discussed.

**Session 4: Workshop (Museum visit)**

Visit to the Museum of Liverpool using guided material exploring the different aspects of Liverpool’s history, and identifying relationships with its natural environment. Groups will work to collect background information from the visit and develop questions exploring the role the natural environment and the physical geography of Merseyside has played in Liverpool’s history. Creation of an illustrated tourist guide and quiz about the development of Liverpool and the influence of the natural environment using material gathered from the museum visit and online resources.

**Week 3:**

**Session 5: Seminar**
Using several case studies in the UK, we will discuss the importance of geological resources and resource locations on the infrastructure and political and economic development of contrasting locations in the UK.

**Session 6: Workshop (Campus rock challenge)**

Students will work in groups to complete the campus rock challenge, identify the range of building stones used on campus. They will then use guided exploration of online material to investigate geological resources in other parts of the UK. Groups will produce concept mapping e-posters using campus rocks and online resources comparing two contrasting geological locations in the UK. Student groups will then present their posters to the class.

**9. Learning Outcomes**

On completion of this module, students will be able to:

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<thead>
<tr>
<th>Learning Outcome</th>
<th>Assessment component which assesses this learning outcome</th>
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<tbody>
<tr>
<td>Demonstrate the ability to extract, summarise and evaluate information from a range of resources</td>
<td>Individual Tourist guide with post tour quiz (Task 1)</td>
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<td>Group e-poster presentation (Task 2)</td>
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<tr>
<td>Demonstrate the ability to communicate information to a mixed audience</td>
<td>Individual Tourist guide with post tour quiz (Task 1)</td>
</tr>
<tr>
<td>Develop confidence in understanding and communicating complex ideas in written language and mixed media</td>
<td>Individual Tourist guide with post tour quiz (Task 1)</td>
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<tr>
<td></td>
<td>Group e-poster (Task 2)</td>
</tr>
<tr>
<td>Work collaboratively to produce a piece of work based on research</td>
<td>Group e-poster (Task 2)</td>
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**10. Skills**

Key skills that will be developed:

<table>
<thead>
<tr>
<th>Skill</th>
<th>How this skill is developed</th>
<th>Mode of assessment</th>
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<tbody>
<tr>
<td>Teamwork and collaboration</td>
<td>Group discussions, activities and tasks in class. Group work for Task 2</td>
<td>Group e-poster</td>
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<tr>
<td>Communication</td>
<td>Orally in group discussion and debate; written communication via completion of assessed assignments. Production of written tourist guide (Task 1) Presentation of group work (Task 2).</td>
<td>Individual Tourist guide with post tour quiz (Task 1) Group e-poster (Task 2)</td>
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<tr>
<td>Synthesising complex information</td>
<td>Workshop and team interaction. Presentation in written and verbal form. Production of written tourist guide (Task 1)</td>
<td>Individual Tourist guide with post tour quiz (Task 1) Group e-poster (Task 2)</td>
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11. Books, e-books and websites

The University website at [www.liv.ac.uk/library](http://www.liv.ac.uk/library) provides access to many relevant books and electronic books, as well as academic journals and databases.

**Core texts**

- *Geology and Environment in Britain and Ireland*. Nigel H Woodcock (1994)
- *People, land and time: an historical introduction to the relations between landscape, culture and environment*. Peter Atkins, Brian Roberts, Ian Gordon Simmons (1998)

**Useful websites**

- [https://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/home.html](https://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/home.html)
- [https://www.rgs.org/schools/](https://www.rgs.org/schools/)