Geography, Earth and Environmental Sciences

Employability Profiles Resource Pack

What are the GEES Employability Profiles?
This resource pack contains profiles of the subject disciplines of Geography, Earth Science and Environmental Sciences (GEES), written from an 'employability' perspective. The profiles are intended to assist our students in articulating the subject dimension of what they have to offer employers, i.e. what was their degree about and what qualities it has helped them develop.

The employability profiles are not intended to be definitive descriptions of the GEES subjects. Rather, they are summaries that are designed to emphasise the skills, knowledge and competencies our students can offer employers.

In addition to the subject profiles the resource pack also provides advice for students and staff as to how the profiles may be used to enhance our graduates' job seeking preparedness. In this respect it is hoped that the profiles will provide a constructive tool to help students develop their employability. Please use the suggestions as to how you may employ the profiles with your students, encourage your students to make use of the profiles independently or feel free to utilise the profiles in other ways. For example, you may want to draw on the profiles to assist your department in marketing your subject when communicating with employers.

How were the profiles developed?
The 'Employability Profiles' resource was developed by the GEES Subject Centre, in consultation with Bianca Kubler and Peter Forbes of the CIHE (Council for Industry and Higher Education), Subject Centre 'Employer Buddies' and the Subject Centre steering group. The materials were piloted with academics from across the GEES disciplines at the Subject Centre annual conference and with academics at the University of Plymouth. The project was funded by the GEES Subject Centre, the Enhancing Student Employability Coordination Team of the Higher Education Academy (ESECT), and the CIHE. The profiles were published in May 2005.

Further information
Further information on the GEES Employability Profiles can be obtained from the GEES Subject Centre:
Tel: 01752 233 530
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Web-site: http://www.gees.ac.uk

Further information on the overall student employability profiles project which involved 12 out of the 24 Subject Centres can be found on the Higher Education Academy web-site at;
http://www.heacademy.ac.uk/2174.htm

Geography Employability Profile

Geography and Employment

Geography graduates have a long track record in gaining employment across a number of different professions and organisations. This is due to the wide range of skills they have developed in the study of the subject through hands-on learning activities such as fieldwork, laboratory work and team-based projects. Working in the natural environment provides opportunities and constraints on project work that are different, unexpected and more challenging than those found in classroom-based activities. The skills and qualities developed through studying Geography are highly transferable into a variety of roles and different working environments, and form the basis of the real contributions highly motivated and able employees can make to an organisation. In particular, the abilities to think through issues, analyse situations and problems and come up with creative solutions, and to work with others in sometimes difficult and tight timeframes, and in unfamiliar environments, are common skills to Geographers. As a result, they have a highly desirable suite of skills which are of a premium to all types of organisations.

What is Geography?

Geography is an integrated study of the complex reciprocal relationships between human societies and the physical components and processes of the Earth. It studies interrelationships and significant regional patterns, recognising the differences and links between cultures, political systems, economies, landscapes and environments across the world. Geographers develop their knowledge through fieldwork and other forms of hands-on learning. This helps to promote curiosity about the social and physical environments, discerning observation and an understanding of scale.

Knowledge, Skills and Competencies

Like all graduates, Geographers should possess the following skills & qualities: communication, organisation, critical thinking, research skills, critical analysis, presentation, ability to work under pressure, self-management, interpersonal skills, confidence and a willingness to learn.

More specifically, a typical Geographer can offer advanced knowledge and skills in many or all of the following:

Knowledge

- Cultural, political, economic and environmental issues incorporating local, regional and international perspectives.
- Moral and ethical issues arising from an understanding of diversity in people and places.
- Issues of globalisation, environmental sustainability, multiculturalism and citizenship.

Thinking Skills

- Expertise in integrating, analysing and synthesising information from a range of sources, gained by working with complex environments and issues.

Practical Skills

- By routinely working in teams on laboratory, desk and field-based research, geographers are versed in project management including planning, execution and evaluation; this involves skills such as time-management, risk-assessment, problem solving and analysis.
- Geography requires the generation and use of a diversity of data types (text, numbers, images and maps). They therefore have well-developed literacy, numeracy and graphicacy skills and are accustomed to manipulating and presenting these various data using a range of ICT formats, including geographical information systems (GIS).
- The complex ‘real-world’ nature of geographical research requires geographers to be flexible and adaptable – they must have the confidence and initiative to be able to deal with the unexpected.

Earth Science Employability Profile

Earth Science and Employment

Earth Science graduates have a strong track record in gaining employment both within related industries and across a number of different professions and organisations. This is due to the wide range of skills they have developed in the study of the subject through hands-on learning activities such as fieldwork, laboratory work and team-based projects. Working in the natural environment provides opportunities and constraints on project work that are different, unexpected and more challenging than those found in classroom-based activities. The skills and qualities developed through studying Earth Science are highly transferable into a variety of roles and different working environments, and form the basis of the real contributions highly motivated and able employees can make to an organisation. In particular, the abilities to think through issues, analyse situations and problems and come up with creative solutions, and to work with others in sometimes difficult and tight timeframes, and in unfamiliar environments, are common skills to Earth Scientists. As a result, they have a highly desirable suite of skills which are of a premium to all types of organisations.

What is Earth Science?

Earth Science is the study of past and present processes operating in the solid Earth, its waters and the atmosphere. It includes the scientific study of physical, chemical and biological processes, the history of the Earth over geological timescales, and the structure and composition of the Earth and other planets. Earth Scientists develop their knowledge through accurate observation and recording in the field, and fieldwork and other forms of hands-on learning are key features of higher education degree programmes.

Knowledge, Skills and Competencies

Like all graduates, Earth Scientists should possess the following skills & qualities:
Communication, organisation, critical thinking, research skills, critical analysis, presentation, ability to work under pressure, self-management, interpersonal skills, confidence and a willingness to learn.

More specifically, a typical Earth Scientist can offer advanced knowledge and skills in many or all of the following:

Knowledge

- Natural hazards/disasters (e.g. volcanoes, earthquakes & tsunami), resources (e.g. water, minerals, fuels), mining, waste disposal etc, and the issues regarding the exploitation and conservation of these natural resources

This knowledge leads to an understanding of the natural environment at small, medium and large-scales, irrespective of political boundaries

Thinking Skills

- Ability to think in an integrated and holistic way and to work with and appreciate complexity and change.
- Capability to think flexibly between different spatial representations (2D – 3D; maps to cross sections) and time-scales (milliseconds to millions of years).
- Decision making - often on the basis of limited information.

Practical Skills

- By routinely working in teams on laboratory, desk and field-based research, earth scientists are versed in project management including planning, execution and evaluation; this involves skills such as time-management, risk-assessment, problem solving and analysis.
- Earth Scientists generate and work with numerical, textual and graphical data. They therefore have well-developed numeracy, graphicacy and image processing skills (including mapping) and they are accustomed to manipulating and presenting these various data using a range of ICT formats.
- The field-based ‘real-world’ nature of Earth science research requires earth scientists to be flexible and adaptable – they must have the confidence and initiative to be able to deal with the unexpected.

Environmental Science Employability Profile

Environmental Science and Employment

Environmental Science graduates have a long track record in gaining employment across a number of different professions and organisations, including environment-based industries. This is due to the wide range of skills they have developed in the study of the subject through hands-on learning activities such as fieldwork, laboratory work and team-based projects. Working in the natural environment provides opportunities and constraints on project work that are different, unexpected and more challenging than those found in classroom-based activities. The skills and qualities developed through studying Environmental Science are highly transferable into a variety of roles and different working environments, and form the basis of the real contributions highly motivated and able employees can make to an organisation. In particular, the abilities to think through issues, analyse situations and problems and come up with creative solutions, and to work with others in sometimes difficult and tight timeframes, and unfamiliar environments, are familiar skills to Environmental Scientists. As a result, they have a highly desirable suite of skills which are of a premium to all types of organisations.

What is Environmental Science?

Environmental science is the study of present and past processes in the surface and near-surface Earth, its waters and atmosphere. It includes physical, chemical, biological and human processes, the history of the Earth during the period of human occupancy, and the monitoring and management of natural and human-induced environmental changes. Environmental Scientists develop their knowledge through accurate observation and recording in the field, and fieldwork and other forms of hands-on learning are key features of higher education degree programmes.

Knowledge, Skills and Competencies

Like all graduates, Environmental Scientists should possess the following skills & qualities: Communication, organisation, critical thinking, research skills, critical analysis, presentation, ability to work under pressure, self-management, interpersonal skills, confidence and a willingness to learn.

More specifically, a typical Environmental Scientist can offer advanced knowledge and skills in many or all of the following:

Knowledge

- Monitoring and management of natural and human-induced environmental changes such as surface and groundwater, human, agricultural and industrial waste, natural and semi-natural environments, environmental impact assessment and environmental legislation.
- An interdisciplinary approach to the awareness of environmental problems that combines breadth and depth of understanding.
- Global awareness and an understanding of earth systems, sustainability and conservation.

Thinking Skills

- Ability to think and make decisions in an integrated and holistic way and to work with and appreciate complexity and change.
- Competence in developing arguments from many points of view including scientific, philosophical and ethical perspectives.

Practical Skills

- By routinely working in teams on laboratory, desk and field-based research, environmental scientists are versed in project management including planning, execution and evaluation; this involves skills such as time-management, risk-assessment, problem solving and analysis.
- Environmental Science requires the generation and use of a diversity of data types (text, numbers and images). They therefore have well-developed literacy, numeracy and graphicacy skills and they are accustomed to manipulating and presenting these various data using a range of ICT formats.
- The complex ‘real-world’ nature of Environmental Science research requires environmental scientists to be flexible and adaptable – they must have the confidence and initiative to be able to deal with the unexpected.

Students: How to Use the Subject-Based Employability Profiles

Do you find it difficult when writing job applications to express what qualities you have to offer employers as a Geography / Earth Science / Environmental Science graduate?

When you attend job interviews are you prepared to answer the following questions; why should I employ a Geographer / Earth Scientist / Environmental Scientist? What can a graduate from your discipline offer that other graduates can't? What challenges and problems have you overcome and how?

The following profiles are designed to help you respond to these situations and sell yourself to a prospective employer. They will help you articulate your experience with examples that demonstrate your abilities. They have been written by subject experts and employers to emphasise the discipline specific aspects of our subjects that employers value. Use them to help you sell what you have to offer to a prospective employer.

The profiles do not offer a definitive list of subject-related skills and knowledge. There will be additional skills and knowledge you posses from your course (and other experiences) that you should draw upon when making your job applications.

How to use the profiles
You can use the profiles to help you write your CV and job applications and to prepare for interviews. The subject specific lists of knowledge and skills are not intended to be prescriptive – not every student will feel they have strongly developed every aspect on the list. Rather, you should use the profiles as a prompt to help you consider the most important things you have learnt from your degree.

Match your experience to the application

- Use the profiles to help you select the knowledge / skills / experience you want to highlight.
- Remember, every job and company is different. You will need to make alterations to your CV and re-focus your application and interview preparation for every job you apply for.
- Select the relevant aspects of the student profile to target each application you make. For example, if you are applying for a job with a multinational company, you may want to highlight understandings of global awareness and local diversity your degree has developed. For a job in a small and medium sized enterprise (SME) you may choose to emphasise how team project work and a 'systems theory' way of thinking have provided you with important management skills.

Personalise, Customise and Exemplify

- Make sure that you are able to exemplify any of the points you choose to highlight from the subject profile. An employer will want to know for example, not just that you are experienced in project management, but how you developed this experience and what you have learnt from it.

Do your research

- It is very important that you research the organisations to which you are applying, to get a feel for their mission, culture and values. This will help shape your CV and indicate to the company that you are really interested in working for them. This can easily be done via the web.
- You may find it useful to articulate for yourself why the knowledge and skills identified on this list are important in the workplace.

Staff: How to Use the Subject-Based Employability Profiles

GEES graduates have a wide range of skills, knowledge and experience useful in the workplace. However, employers frequently report that students are poor at articulating the skills and qualities they have to offer. These employability profiles have been written by subject experts and employers in order to help our students better articulate the qualities Geography / Earth Science / Environmental Science graduates possess. The profiles are accompanied by advice to students giving them tips on how they might use the profiles.

Staff are also encouraged to use the profiles when working with students on career preparation. Career preparation activities are now common in the curriculum and are typically found in preparatory activities of work experience modules, careers modules and as part of personal development planning (PDP).

Suggested Employability Profile Activities

Suggestion 1: CV development/Job Application Practice

- Provide your students with the application details of two relevant but different jobs. You may want to choose one subject related job and one general graduate job in order to act as a contrast.
- Get your students to develop two CVs or write two job applications, targeted at the two different positions.
- Along with the general advice you provide on writing a good CV/application, give each of your students a copy of the student profile in order to help them emphasise the distinctive qualities they bring to the position as a graduate of their discipline. Encourage them to exemplify the main qualities they choose to stress.
- This activity will give students experience in CV/job application writing; it will highlight the importance of targeting CVs and applications (i.e. one size does not fit all); and it will get students to consider what distinctive qualities they can bring to a job as a graduate of Geography / Earth Science / Environmental Science.

Suggestion 2: Interview Technique

- Provide your students with the application details of a relevant job.
- Inform them that they are required to undertake a mock interview for this position.
- In preparation for the interview (in addition to the other advice you give your students on interview technique), provide all students with a copy of the student profile information. Suggest they reflect on those aspects of their degree they think are most relevant to the job application.
- You can further help your students prepare for interviews by getting them to think about a situation they were in, the task that needed doing, the action they took, the result or outcome achieved and what they learned from this. This will help them to become conversant with competency based interviewing and help them to develop their story.
- At the interview ask your student some of the following questions:
    - Why should I employ a Geographer / Earth Scientist / Environmental Scientist?
    - What can a graduate from your discipline offer me that other graduates cannot?
    - What challenges and problems have you overcome and how?
    - What are the main skills you can offer the (mock) position?
    - Give relevant examples of the actual activities you have undertaken that required the skills you highlight (try to encourage your student to highlight how different activities develop different aspects of the same skill e.g. project management requires a different emphasis on time management and organisational skills than would writing an essay).
- This activity will give students experience in preparing for and handling a job interview and it will get them to consider what distinctive qualities they can bring to a job as a graduate of Geography / Earth Science / Environmental Science.