

# Field, Lab & Practical-based Teaching



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# Types of Practicals

## Day / Residential trip

- Exemplify specific features
- Trial a technique
- Visit location

## Field-based

- Notebooks
- Description
- Logging
- Measuring
- Mapping
- Surveying
- Participant observation
- Interviewing
- Archival work
- Ethnography
- Photography

## Scientific laboratory

- Soil, water and plant sample preparation
- Microscopy
- Particle size analysis
- Soil and water chemical analysis

## Computer laboratory

- GIS
- Matlab
- SPSS
- Nvivo
- R python
- Programming
- Modelling
- Remote sensing
- Canoco

# Levels of Experiment

- Demonstration
  - Technique is shown.
- Exercise
  - Recipe card instruction.
- Structured enquiry (PBL)
  - Students select methods/materials.
- Open-ended enquiry
  - Students determine/design experimental procedure.
- Project work
  - Dissertation
    - Student-led or lecturer defined enquiry.

# What are the aims/purpose of practical work and fieldwork?

1. Develop subject-related understanding.
2. Develop subject-related practical, professional, and transferable skills.
3. Put theory into practice.
4. Record and analyse data.
5. Learn about research design.
6. Understand ethical issues and to respect the environment
7. Negotiate teamwork and project management.
8. Visit different places that students would not normally visit
9. Encourage students to take responsibility for their learning

Source: Based on Gold *et al.* (1991) and Livingstone *et al.* (1998)

# Why do we do it ?

**The QAA's *Benchmark Statement for Geography* states:**

Geography is intrinsically a field-based subject. Field experience is an essential part of geographical learning and all geographers require the opportunity to plan, undertake and report significant fieldwork during their programme. Students are familiar with, and practise, methods and strategies of field research in human and/or physical geography, taking a critical view of the challenges and opportunities of field-based research.

(QAA, 2014, para. 3.16)

# What's your role ?

Guide

Instructor /  
leader

Facilitator

Evaluator



Observer /  
commentator

Assessor

Counsellor /  
mediator

Drop-in  
monitor

# What's in it for you ...

- Training and Professional Development.
- Evaluation and Support.
- Reward and Recognition (Associate Fellow HEA).
- Future Career Development.

# Be organised ...

- Ensure you know what your role is/what is required of you.
- Discuss with the lecturer what the Aims and Learning Outcomes of the activity are beforehand.
- Be prepared, and read the information given to students.
- Be sure you can complete the task you are demonstrating.
  - If you're unsure talk to the lecturer, other demonstrators, or the technician about the task.
- Satisfy yourself that you are happy with the safety preparation.
- Be sure you understand the requirements of the assessment.

# You should ...

- Be approachable.
- Be proactive.
- Determine students' ability quickly.
- Involve students in the practical.
- Listen to students and their concerns.
- Not be afraid of saying "*I don't know but I will find out*".
- Encourage students.
- Do not just tell them the answer (they will ask).
- Do not do the students' work for them.

# You should ...

- Be available (within reason).
- Prepare beforehand.
- Provide (formative) feedback.
- Ask for constructive feedback from staff (and students).

# You can enable student learning by ...

## Asking questions ....

- For Recall, Observation or Thought
  - Open or closed
  - Encouraging or Threatening?
  - Clear / Confused?
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- Using Scaffolding
  - Use Prompting

# Tackling Problems ...

- Work in pairs/threes to review the problems described in the handout.
- Read one, discuss it and brainstorm a response before continuing to the next problem.

# Take Home Points

- Know the purpose of field, lab or practically-based work.
- Consider the best ways to prepare
  - Health and Safety requirements.
  - Student learning goals.
  - Own knowledge and skills.
- Encourage students' active engagement and be proactive.
- Consider the needs of individual students
  - Disability issues.
  - Well-being.
  - Mental Health issues.
- Give formative (and summative) feedback.
- View your demonstrating as a place to develop your own teaching skills.