Fieldwork in the Forest
Resources for teaching Geography in Secondary Schools (England)

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www.sylva.org.uk
Why is there a need for resources for teaching about British woodlands and forestry at secondary level?

rain forest in Brazil 😊
oak woodland in UK 😞
The opportunities to maintain and increase forest education vary at different ages and stages in schools in England:

- **Primary**: Forest School/Outdoor learning. Cross-curriculum classroom projects.
- **Years 7, 8, 9**: Opportunities for whole school projects? Greatest flexibility in curriculum and opp’s for cross curriculum learning.
- **GCSE**: Teaching driven by textbook and exam board specification. Learning more limited to subject silos.
- **AS/A-Level and IB**: Geographical skills fieldwork and independent project. Detailed case studies.
What opportunities are there for forest education in England’s secondary school curriculum?

• Research into the curriculum process in 2014 concluded we cannot change subject content until DfE changes it again.

• Teachers were consulted in 2015 and identified opportunities for forest education.

• Geography was chosen as a subject with the most opportunities.
What are the opportunities for forest education in the new Geography GCSE and A Level in England?

**GCSE**

**Practical:** 2 fieldwork days in contrasting environments (e.g., one rural and one urban)

- exploring physical and human processes and the interactions between them.
- collecting primary physical and human data

**Theory:** Pupils assessed on their fieldwork experience in the GCSE exam. 15% of the total assessment weighting will be on fieldwork:

- 5% fieldwork skills and 10% fieldwork application

**A Level**

- The A Level *independent investigation* is 20% of the final A Level mark.
- AS and A level specifications require students to undertake 2 days of fieldwork at AS, and 4 days of fieldwork for A level.

A Level fieldwork demands a high degree of responsibility from students for selecting research questions, applying relevant techniques and skills, and identifying appropriate ways of analysing and communicating findings.
‘Planning Geography Fieldwork’
For Secondary Geography PGCE Interns
Tuesday 24th October 2017
at Combe Mill, Blenheim Estate

Supported by individuals and organisations in the Evenlode Catchment Partnership:
Teacher training pilots from 2015-2017 identified three challenges to Geography fieldwork in forests:

1. **Access to local woodlands**
   - How can teachers find them?
   - Permissions, access, health and safety, support of an ‘expert’

2. **Resources and fieldwork methodology**
   - There are a lack of resources on British woodlands at secondary level and forest fieldwork methodology

3. **Training CPD and PGCE**
   - Some trainee teachers have not been in the woods! Need practical confidence and knowledge of them.
**Challenge 1. Access to local woodlands**

How can teachers find local woodlands? Gaining permission, access and support.

- Large landowners may develop secondary school programmes eg Blenheim Estate... a friendly forester!

- Small woodland owners can let their local schools know their woodlands are available.

- Schools can contact organisations and charities like many of us here today.
Challenge 1. continued Access to local woodlands
Health and safety considerations

- Tree safety checks
- Risk assessments
- Emergency procedures
- First Aid kits
- Insurance
- Safeguarding young people
Challenge 2. Resources and fieldwork methodology for forests and woodlands

- Forest education resources and websites are listed on Sylva’s TIMBER! directory
- Fieldwork methods to be launched in October 2018
- Field Studies Council has excellent identification materials for animals and plants.
Fieldwork in the Forest example investigation: What is the impact of two different woodland management regimes on biodiversity?
Surveying invertebrates on the ground

**Equipment**
- Quadrats
- ID resources
- Map of site
- Tape measure

**Method**
- Random throws of quadrat
- Transect using tape measure and quadrat at intervals
- Find invertebrates within quadrat
- ID by name or type
- Tally and get an average per woodland
Surveying invertebrates living in the trees

**Equipment:**
- A stick!
- A white cloth
- ID resources

**How:**
- Tap tree branches
- Collect fallen invertebrates
- ID by name or type
- Tally to get an average per woodland
- Survey in same places as quadrats
Surveying ground flora

Equipment

• Quadrat
• ID resources

How:

• Percentage cover of plants by type
• Presence/absence of certain species
• Random or transect
Survey of tree canopy and light

**Equipment**
- Quadrat
- Tape measure
- Light meter

**How**
- Hold quadrat above head and estimate % canopy cover or light
- Light meter for more accurate readings
- Survey in same place as invert and plant quadrats/transects
Forestry methods: tree height, DBH, canopy area

Equipment
• Tape measure
• Clinometer
• DBH tapes

How
• Tree height trigonometry method
• DBH using tape
• Canopy mapping using measurements from trunk out to furthest branch
• In same places as other surveys
Challenge 3: Training and CPD for PGCE
Get trainee teachers into the woods!

• Training gives them confidence to go into woodlands.
• They learn about forestry and woodlands, and experience the potential of them for learning.
Feedback

From the PGCE interns:

“I never knew there was so much geography in forests!”

“I hadn’t done this type of fieldwork before with trees – I enjoyed myself and remembered how fun fieldwork is”

“this was great, very interesting to be in a woodland and I learnt some very valuable techniques”

From the PGCE Tutor:

“The teachers were really interested in the techniques and possibilities and it was a brilliant opportunity for them to see what it might be like out in the field with a class. Some of them have not done river or forest fieldwork before and the chance to have specialists talking through the investigation options and techniques was very beneficial for them.”
What can we do as a sector? Suggestions for the Forestry Skills Action plan process.

• Open up our woodlands to secondary schools for fieldwork
• Give talks to secondary schools in classroom or in forests
• Mentor A Level students doing independent investigations on real life forestry issues
• Explore the other routes to engagement:
  - Vocational courses
  - Extra curricular activities
• Engage with national teaching bodies eg Geographical Association who are involved in curriculum development