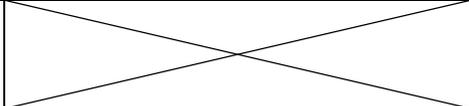
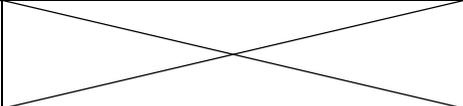


## RESOURCES WISH LIST

Funding is an issue so need to prioritise open access software and sharing of resources.

<b>TIME:→</b> <b>TYPE OF RESOURCE↓</b>	<b>between now and August 2020</b>	<b>Academic year</b> <b>2020-21</b>	<b>Longer term</b> <b>(aspirational?)</b>
<p><u>Field trips</u></p> <p>visiting places (which, what types), sampling (how), measuring (and beyond)</p>	<p><b>COMPILATIONS</b></p> <ul style="list-style-type: none"> <li>A summary of what video resources are already available, with some form of quality mark for each</li> </ul> <p><b>GENERAL SKILLS</b></p> <ul style="list-style-type: none"> <li>What to wear and do on a field trip</li> <li>Field sketches – both how to video and explorable landscapes or good photographs students can make field sketches OF.</li> <li>Introduction to keeping a field notebook</li> </ul> <p><b>CORING</b></p> <ul style="list-style-type: none"> <li>Getting students to engage with how and where to take the core (HUMPOL pollen dispersal and deposition modelling practical might help)</li> <li>Videos of coring: Russian corer in peat bog, lake coring etc etc.</li> <li>Describing a core – how to, digitised image from the core or cores, ideally presented in 3D and movable so students can do it</li> </ul> <p><b>DENDROCHRONOLOGY</b></p> <ul style="list-style-type: none"> <li>Video of taking tree rings, high quality images of tree rings (resource already suggested)</li> </ul> <p><b>STUDYING THE MODERN LANDSCAPES</b></p> <ul style="list-style-type: none"> <li>Sampling modern environments – soil, water, vegetation, diatoms from rocks, measuring lichens – videos and possibly images for interactive stuff</li> <li>Film of different modern environments e.g. different types of vegetation</li> <li>Visualising and understanding exposures, sedimentology</li> </ul> <p>Cryptic comment:</p> <ul style="list-style-type: none"> <li>ESRI storybook – interactive approach. Mike Simmonds</li> <li>Citizen Science Pack – students from multiple institutions, collation of data sets</li> </ul>	<p>None that belonged here</p>	<p>Multi-aspect VR of a landscape showing what can be learned from each aspect</p> <p>Potentially a community project where different specialities all develop things around the same location thereby creating a “mega-virtual field course” site with lots of different options and resources which could be used for a whole module.</p> <p>(a small number of sites would make sense to allow different environments to be explored without being overwhelming – e.g. NW European upland like Arolla, New England deciduous woodlands, somewhere tropical, somewhere semi-arid (lots of geomorphology, dunes, arid lake sediments), somewhere in the southern hemisphere etc)</p> <p>Interactive animation of the whole coring process (e.g. pushing harder on corer if hitting clay; when opening the core, zooming in on matrix of the core at different depths for doing initial core description in the field)</p>

<p><u>Practical skills</u></p> <p>wet laboratory work, identifying and counting or measuring proxies (which), data analysis and interpretation</p>	<p><b>COMPILATIONS</b></p> <ul style="list-style-type: none"> <li>• Methods sheets from multiple labs</li> <li>• Seeing what other disciplines have available for various skills</li> <li>• List of secondary data sources for student projects</li> </ul> <p><b>MICROSCOPY</b></p> <ul style="list-style-type: none"> <li>• CoPol expansion – other pollen sets, other groups <ul style="list-style-type: none"> <li>◦ Diatoms with case studies of e.g. acid lake, eutrophic lake ready to go</li> </ul> </li> <li>• R+Shiny-version</li> </ul> <p><b>WET LABS</b></p> <ul style="list-style-type: none"> <li>• Core handling: split cores, describe cores, take samples</li> <li>• Images of a range of sediment types e.g. gyttja, clay, clay-silt etc., perhaps in different states (block, in water, under microscope) so students can describe them</li> <li>• basic sedimentary analyses e.g. loi, mag susc, XRF</li> <li>• Videos of sample preparation for pollen, diatoms etc</li> <li>• Short videos of scanning a slide with expert narration (“live” practical)</li> </ul> <p><b>DATA HANDLING:</b></p> <ul style="list-style-type: none"> <li>• Age-depth modelling using e.g. Maarten’s R packages</li> </ul>	<p><b>MICROSCOPY:</b></p> <ul style="list-style-type: none"> <li>• CoPol development <ul style="list-style-type: none"> <li>◦ More taxa</li> <li>◦ Migration to R</li> </ul> </li> </ul> <p><b>WET LABS</b></p> <ul style="list-style-type: none"> <li>• High quality edited videos explaining/showing methods steps, H&amp;S, and explaining underlying science for e.g. pollen prep, foram sieving and picking.</li> <li>• Materials to help train students about lab safety in advance of a return to labs to make sure they are prepared</li> <li>• Simulating a simple measurement e.g. pH, DNA extraction</li> </ul> <p>Video techniques done properly</p>	<p>Expanding photo repositories to enhance existing resources – potential need for funding as time-consuming and requires specialist technology</p> <p>How to use a microscope video for once we are back in the labs</p>
<p>Other materials</p>	<p>Short videos of experts talking about their specialist topic e.g.</p> <ul style="list-style-type: none"> <li>• isotopes in carbonates</li> <li>• less widely used biotic proxies</li> <li>• carbon cycle and radiocarbon dating</li> <li>• Geochemistry and geochronology methods and principles</li> <li>• Specific places e.g. tropics, Tasmania, mountains...</li> </ul>	<ul style="list-style-type: none"> <li>• Data sets for assessments</li> <li>• Desk based activities for placement replacements</li> </ul>	<ul style="list-style-type: none"> <li>• Baseline data relevant to today</li> </ul>

<p>Aspirational With a budget, etc</p>			
<p>Pedagogy</p>	<ul style="list-style-type: none"> <li>• How to give students “ownership” of virtual samples to improve engagement with practical stuff?</li> <li>• Resources accompanied by instructions/suggestions for application within teaching environment and incorporation of assessment</li> <li>• Share ideas for small experiments within the community that students can do at home.</li> <li>• Sharing/discussion/advice around assessments: how to bring different materials together for holistic interpretation of landscape change</li> </ul>	<p>Research on what students are using, how they experience it, what they like and don't like</p> <p>Clear message from RGS, and benchmark statements regarding fieldwork.</p>	<p>Complete set of lab assignments focused on lake/peat core proxy analysis</p> <p>Use resources to increase non-contact learning time</p> <p>Make these sorts of things normal and useful, not just for emergencies</p>