

## Technology and 'A' Level Geography

*This article is based on a session prepared for the Geographical Association Tyne and Wear Branch in February 2014, and has been sourced by Geography Matters. Using technology in the classroom is a great way of keeping pupils engaged, but also is increasingly necessary for geographical enquiry. This article contains some good ideas for incorporating technology into your lesson plans.*

*Key words: Technology, GIS, social media, revision, journals*

### Introduction

All 'A' level Geography specifications require a great deal from the students who are preparing for the associated examinations, and from their teachers, who are planning engaging and topical lessons. When I completed my Geography 'A' level back in 1982 (I got a 'C' by the way), technology was limited. I owned a Sinclair ZX80, but it wasn't exactly an iMac, having just 1 kilobyte of memory! I had a couple of textbooks (not specific to any awarding body) and a typewriter. The main resource I relied on was my own folder of notes. 2014 is a long way from 1982 in many ways. This article outlines how technology can be used to support students and teachers.

### 'Pre-reading'

Once students have elected to study 'A' level Geography, they should not start it 'cold' but be encouraged to prepare over the summer break. One complication in the current system is that students are often no longer certain of a place in their preferred 6<sup>th</sup> form or college before they receive their results. Suggested readings can be placed on a departmental **blog** which students have access to. A **QR code** linking to the address can be sent to students, or handed to them before they complete GCSE studies. Blogger.com or Wordpress.com are appropriate (and free) blogging tools to facilitate this. Why not involve students eventually, by promoting them to **administrator** status for a week at a time as a 'guest editor'.

### Getting organized

Departments will hopefully have access to digital mapping via some means. This can be used to reinforce global awareness. Sixth form students' general geographical knowledge of countries can sometimes be limited, so take the chance to locate all case studies on a map, and practice drawing sketch-maps for key case studies. They could even play 'map quiz' games such as GeoGuessr, LocateStreet, Earth-Picker or (my favourite) [www.mapcrunch.com](http://www.mapcrunch.com) to hone their location skills.

## Digital Mapping options

Name	Features	Cost
Digimap for Schools	Streaming OS mapping at all scales, along with a range of annotation tools, and ability to create maps as PDF downloads. <a href="http://digimapforschools.edina.ac.uk">http://digimapforschools.edina.ac.uk</a>	From £70-£150 (excl. VAT)
Digimap for Colleges	FE version of DfS –includes free resources <a href="http://digimapforcolleges.edina.ac.uk/">http://digimapforcolleges.edina.ac.uk/</a>	Free (JISC subscribers)
ArcGIS Online	A range of free maps and further options for subscribers. <a href="https://www.arcgis.com/home/">https://www.arcgis.com/home/</a> Try creating some <b>StoryMaps</b> too, for key ideas: <a href="http://storymaps.arcgis.com/en/">http://storymaps.arcgis.com/en/</a>	£100 / year – StoryMaps are free to create
Luminocity and Datashine	<a href="http://luminocity3d.org/">http://luminocity3d.org/</a> and <a href="http://datashine.org.uk/">http://datashine.org.uk/</a> allow for the analysis of <b>2011 UK Census Data</b> – explore issues related to demographics, employment and housing patterns.	Free
Bing Maps	Switch to an <b>OS layer</b> using the ‘Road’ drop-down menu. <a href="http://www.bing.com/maps/">http://www.bing.com/maps/</a>	Free
LondonMapper	This includes a range of new visualisations to encourage exploration of this city, which features on most specifications in some way: <a href="http://www.londonmapper.org.uk">http://www.londonmapper.org.uk</a>	Free

## Research

Students should be introduced to research that is relevant to their studies, which is particularly relevant for those who go on to undergraduate studies. They should be able to give their opinions on it, or even develop their own small-scale research suggestion.

Here are a few research-based projects to introduce students to:

- Spatial inequality in cities: <http://visualisingmillroad.com>
- Follow the Things: <http://www.followthethings.com> - an Exeter University project exploring consumption and globalisation.
- Gapminder: <http://www.gapminder.org> - perfect for exploring inequalities on a global scale (recently updated)

## Getting organized

There is a wealth of information available, and students need to get organised. I use a range of social media tools to curate and sort useful resources for later use.

**Pinterest:** a visual bookmarking tool. Download a browser extension, and any image on a website can be quickly added to a ‘pin board’ and shared with others in various ways.

<http://www.pinterest.com>

**Pearltrees / ScoopIt** – similar tools for collating and storing web materials, and organising them visually. <http://www.pearltrees.com> and <http://www.scoop.it>.

**Flipboard** allows for the production of online magazines, which can be shared with others, or produced collaboratively, and then ‘read’ in the same way as a physical magazine if using a tablet. <https://about.flipboard.com>

<http://www.geography.org.uk/resources/technologyandalevelgeography/>

Most of the tools mentioned in this article will also work on a smartphone or tablet. The number of apps grows by the week, but a useful list with some reviews is available on the GA's ICT special interest group blog <https://gasigict.wordpress.com/>

## Twitter

Twitter can be used as a method of communicating with students and also with experts, as well as producing a personalised news feed. I tend to follow and unfollow relevant accounts when teaching a topic, and direct questions to people who are 'on location'. I recently contacted ANI, who operate the 'Union Glacier' camp in Antarctica, and also took part in a Skype Classroom link-up with a coral scientist in the Caribbean. Students can be asked to prepare questions in advance of the talk. 'A' level studies involve students in more detailed and critical analysis of topics, so the chance to connect with experts should be explored. Some of my recent work has involved an exploration of what can be called 'powerful knowledge'. Use technology to stretch and challenge students.

## Case Studies

Encourage students to 'take case studies further'. They can be co-constructed by setting up a **Google Drive** document, to which all students have editing rights. Populate this with some initial information and questions, and provide time for them to add their ideas and responses to open-ended, un-googleable questions. Google Drive <http://drive.google.com> is free if you have a Google account. If extreme weather is forecast, use the compelling <http://earth.nullschool.net/> visualisation tool to explore surface and high-level winds, or extreme temperatures. The Royal Geographical Society has made a number of resources available through their 'From the Field' initiative with The Goldsmiths' Company. <http://www.rgs.org/OurWork/Schools/Teaching+resources/Key+Stage+5+resources/Key+Stage+5+resources.htm>

## Journals

Encourage students to read suitable journals and newspapers, most of which (other than a few with a paywall) have a website and Twitter feed.

'*The Economist*': <http://www.economist.com/> - articles are available online for a short period after publication (@TheEconomist)

'*Geography Review*': Nelson Thornes journal is essential reading, but also has additional materials on their e-Review page: <http://www.hoddereducation.co.uk/Product-Landing-Pages/Magazines/Magazines-extras/Geography-Review-extras> (@GeogReview)

'*Geography*': selected articles from the GA's journal could be made available – subscribers have access to an archive of issues going back over 100 years:

<http://geography.org.uk/journals/journals.asp>

'*The Guardian*'s DataStore offers a range of data-sets with some preliminary analysis and some 'big-questions' that students can investigate further:

<http://www.theguardian.com/data>

There are also two useful eBooks: one from Paul Turner:

<https://itunes.apple.com/gb/book/teaching-geography-in-digital/id868932999?mt=11>, and one produced by myself and Richard Allaway on the theme of 'Extreme Environments':

<https://itunes.apple.com/gb/book/extreme-environments/id552753230?mt=11>

<http://www.geography.org.uk/resources/technologyandalevelgeography/>

## Revision

Encourage students to produce a range of **Flipboard** magazines for each of the main topics, which they can revisit and flip through as the exam approaches.

<https://about.flipboard.com>. Add 'articles' using a browser extension or app. Students can also create custom-made revision materials using flash cards, or recording a podcast which can be shared using Audioboo or similar tools. This has recently changed its name to Audioboom: <http://audioboom.com> and offers free recordings up to 3 minutes long (long enough to summarise a case study or process).

## Further references

<http://www.geographical.co.uk/rgs/news/item/625-geography-student-numbers-increase>

Visit the awarding body websites for relevant downloads. Some of them also have subject communities for further teacher support. There are also the subject-specific NINGs: the Edexcel one <http://newedexcelgeog.ning.com/> has almost 4000 members.

## The Author

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