

## **Pupils map out digital route to learning**

Children at state and independent schools across Britain have begun learning with the most highly detailed Ordnance Survey digital maps under a new 'mapping on demand' agreement.

Local studies, field work and controlled assessments are all being supported by the move which widens an existing map subscription service to include all schools, academies and teacher training establishments in the country.

The Advisory Unit: Computers in Education, which supplies geographical and ICT products and training services, has joined forces with geoportal emapsite to make the mapping available.

Under the agreement, schools pay a small annual subscription that enables The Advisory Unit to source their map orders from emapsite and supply them ready to use on disk in AEGIS, the popular GIS software for UK secondary schools.

Teachers can build their map libraries by choosing up to four digital extracts a year from anywhere in Great Britain.

The datasets comprise very detailed OS MasterMap mapping as well as OS 1:10 000 scale, OS 1:25 000 scale and OS 1:50 000 colour colour rasters. Teachers can choose four maps with the same scale or choose a mixture of scales.

Diana Freeman, Director of The Advisory Unit, said the new agreement with emapsite, which follows on from an initial ground-breaking National MapPilot for Schools (2006-10), would help guarantee continued and improved access to digital maps for many thousands of pupils.

Ms Freeman said: "We are bringing industry-standard, ready-to-use interactive maps into the classroom. This will support a range of National Curriculum studies requiring mapping and GIS such as geography, ICT and citizenship. The value and appreciation of digital mapping has never been higher and many disciplines have developed modules that benefit from its use."

Geography pupils at Key Stages 3 and 4 are core groups to benefit. The agreement will support the full range of practical map skills including the use of symbols, grid references and contours and the understanding of distance, scale and direction.

As pupils prepare for GCSE, the map data will help with decision making based on the location and distribution of land use and the patterns of settlements and communications.

On receipt of the map data, teachers use AEGIS software to create and display interactive on-screen worksheets. Pupils add their data to the maps for classwork, fieldwork and controlled assessments.

Ms Freeman added: "Pupils may import all kinds of information including location charts, flowlines, traffic surveys, shaded areas, statistics and census maps, all prime examples of GIS in action."

Hurst Community College in Tadley, Hampshire, a mixed comprehensive of around 1,100 pupils, is one of the first schools to make use of the new service.

Geography teacher Stephen Hennah said the datasets involved, especially OS MasterMap, are already playing an important role.

Mr Hennah said: "By combining the maps and the AEGIS software, we can for example teach Year 7 pupils how to make a schematic map of a locality and present different kinds of information on land use through pie charts or graphs. Whereas in the past it could have taken a double lesson to prepare a map template for this kind of work, we can now do it in just a few minutes."

The Advisory Unit developed AEGIS as a flexible, user-friendly software solution for schools. The AEGIS MasterMap module, for example, enables teachers to display accurate, large-scale fieldwork maps for studying land use. The mapping is constructed in layers including polygons for buildings, with a buildings data table ready to use with pupils' own data.

AEGIS is backed with a range of online teaching resources including tutorial and lesson plans, curriculum planning guidance, Goad town plans, free viewer downloads, helpsheets and telephone and email support.

James Cutler, Chief Executive of emapsite, which hosts the UK's most comprehensive range of geographic information for professionals, said: "Our agreement with The Advisory unit means schools can receive the most up-to-date digital mapping for any area they choose. The data ranges from detailed building and land use polygons for large-scale fieldwork down to smaller-scale mapping for wider area context and surrounding transport networks. Digital mapping is an incredibly

dynamic and diverse resource and it's significant that through this agreement we can increase access and speed of delivery for both students and teachers."

For more information, visit [www.advisory-unit.org.uk](http://www.advisory-unit.org.uk).

## **Case study**

### **Hurst Community College, Tadley, Hampshire**

When teaching local or global development issues to Year 7 Geography, a map is an ideal way to show all manner of indicators. In the UK, for example, it's easy to plot the much touted north-south divide using regional employment statistics, types of industries, household income and other factors. For some geography teachers, however, creating such a map used to involve a battle with GIS software that was not exactly user-friendly. Stephen Hennah, who teaches at the 1,100-pupil Hurst Community College at Tadley in Hampshire, admits his first attempts to help Year 7s make their own maps took longer than they should. Now, thankfully, regular AEGIS updates from The Advisory Unit have speeded up the process.

Stephen explains: "Three years ago it was not a very productive process, even for very straightforward indicators. Now, with the software and mapping you can source from The Advisory Unit, you can have a map and a data table linked together very quickly. You can introduce multiple indicators and display the results in a range of ways. It's very important for studies at whatever scale to be able to show more than one variable. With AEGIS you can display searches and use the range function to indicate the 'top five or ten' variables. You can, for example, plot population figures in different areas on a map and with the range function show the most populous top five in a table, graph or pie chart."

Owing to The Advisory Unit's unique relationship with emapsite, schools such as Hurst Community College are provided with pre-loaded suites of data from Ordnance Survey's digital map portfolio, including OS MasterMap, localised to their areas of interest and field studies.

When it comes to larger-scale mapping data for local studies, Stephen has used OS MasterMap for controlled assessments involving his Key Stage 4 pupils. He recently took a class to Lyndhurst in the New Forest to create a schematic map of the town centre. "OS MasterMap makes it straightforward to focus right in on the area you want and create the data table," he says. "Whereas in the past it would have taken a double lesson to prepare a map template for this kind of work, we can now do it in just a few minutes. For the Lyndhurst field work, the pupils created and colour-coded a land-use survey that they could print out by filling in the table with data linked to each building polygon and creating a thematic map. We then looked at traffic counts with directional flow arrows, creating a new layer within the digital map. The

thickness of lines indicated the volumes of traffic at specific points. Ultimately we were able to break down the information to show the numbers of HGVs, cars and other vehicles passing through the town centre.”

Year 7 Geography pupils at Hurst Community College also work on an environmental survey of their school campus. Stephen says: “We create our own maps from AEGIS software linking notes and photos to different places. We can look at the location points and compare issues such as noise, litter, the number of litter bins, and so on, choosing a method of graphing the information at these locations.”

Stephen has also used AEGIS software and mapping to compare how different locations appear in historical as against modern mapping. The maps can be made to fade in and out in sync, showing how the areas have changed over time. He has used the same technique comparing locations at Swanage on the Dorset coast in terms of their underlying geology and how they appear on 1:50 000 Ordnance Survey mapping.

Stephen summarises: “Whether at Key Stages 3 or 4, understanding and using maps is a vital way to learn geography. The digital mapping and software available through The Advisory Unit and emapsite are ideal for classwork and field studies, saving time and helping teachers bring the wider subject to life for pupils.”

### **Editor’s note**

emapsite is widely recognised as a leading source of online digital mapping services and location intelligence solutions. The company, based in Eversley in Hampshire, provides the most comprehensive range of geographic information to professionals in the UK. emapsite also provides geospatial data hosting and delivery services in the location intelligence arena. emapsite is a Premier Partner of Ordnance Survey. For more information, visit [www.emapsite.com](http://www.emapsite.com) or call 0118 973 6883.

The Advisory Unit is a leading supplier of geographical and ICT products and training for schools. It has been active in promoting digital mapping and GIS in schools for many years. For more information, visit [www.advisory-unit.org.uk](http://www.advisory-unit.org.uk).

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