

## From Webcams to Panoramas

One of the perennial challenges we have as geography teachers is bringing the outside world into our classrooms in order to stimulate our students' thoughts and to encourage them to view our world more analytically. The reality is that there is nothing more effective than actually being there, but the field visit is time consuming and costly experience. I remember being led up the slopes of Cader Idris as a teenager, to view the fantastic glacial landscapes, only to find the whole scene completely obliterated by thick low cloud and a heavy snowstorm, so even this 'Rolls Royce' of geographical experiences is not without its drawbacks.

Webcams of particular locations can bring a live image directly into the classroom and the technology is progressing so that the picture quality and image frequency are rapidly improving. We can now watch Old Faithful erupt or monitor the rush hour traffic in London from the comfort of our classroom. I have found webcams particularly useful for teaching about the variation in weather in the British Isles and about global time zones and seasons. You can find resources on my school's website at [www.whs.bucks.sch.uk](http://www.whs.bucks.sch.uk).

In exploring for new and exciting webcam views, I discovered another range of resources in the form of virtual reality (VR) 360° panoramas which have great potential as visual resources in geography. The first thing that will strike you about 360° panoramas is how powerful they can be as a visual tool to give your students a sense of space and time, particularly when viewed using a projector onto a large screen or whiteboard. Indeed it is easy to get carried away, viewing place after place, in the same way that many of us have whiled away time exploring the Earth's surface using Google Earth. Be warned that your students will want to do the same, so it is important to plan how you intend to use 360° panoramas in your lessons. What is almost certain is that many students will find them fascinating because of their interactive nature and because of the high definition and quality of many of the images.

We all routinely use coloured photographs, movie clips, animations and other visual materials in our lessons. 360° panoramas offer at least two distinct advantages over these more conventional types of resources:

- **Powerful Sense of Place** – What will strike you about many of the images is the visual quality giving the viewer not just tremendous detail and strong colours, but a strong sense of place. In a few cases, the visual sense of place is supplemented by sounds of the location, such as a busy African market place, giving the viewer an even more powerful sense of being there.
- **Interactivity** – In most panoramas, you have the ability to control the image: to zoom in on detail, or to zoom out to get a better overview. For example, on an image of children in an orphanage in Mali, you can zoom in on a child's face to see her expression in a way that an ordinary photograph would not allow. In the same panorama, you can study the building materials of the walls of the orphanage, you can zoom in on the children's feet to see their footwear, or lack of. You can even look beyond the buildings to gain a glimpse of the surrounding landscape.
- **Quality** – Many of the 360° panoramas are taken by professional photographers or enthusiastic amateurs. Consequently, the quality of many of the images is outstanding. Compared with those fuzzy images printed in some textbooks, or provided by some examination boards, the 360° panoramas are

in a superior class of their own. They even exceed the quality of computer graphics that many students have experienced in computer games - one up for the real world!

Typically a 360° panorama will be about one megabyte (1mb) or more, so their use is impractical without a good broadband connection. You will also need to ensure that the computers have an up-to-date version of: Apple QuickTime, Java Software and Adobe Flash Player which are needed to run the majority of panoramas.

On my school's website ([www.whs.bucks.sch.uk](http://www.whs.bucks.sch.uk)), I have created a number of panorama collections based on locations and themes in a section called Geography in Panorama. Here you will also find links to a number of different sources of panoramas to suit your own needs and suggestions on how they might be used.

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