



a new management plan for Stonehenge

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Google® Earth's potential as a decision-making tool makes it arguably the most important ICT tool in the geography classroom. The following learning activity demonstrates how it can be used to extend spatial thinking beyond the 'dude, where's my house?' stage.

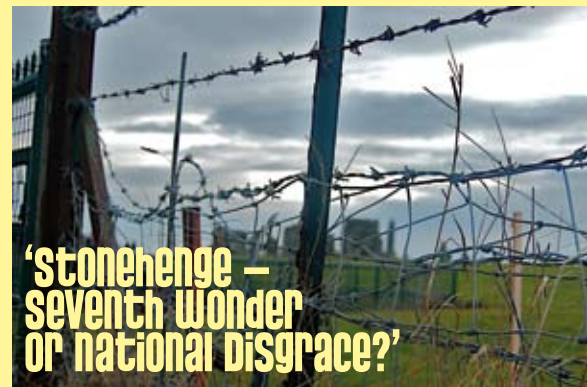
Students are given an informative Google Earth file based on Stonehenge that includes an Ordnance Survey map extract, pictures and video clips. These resources form the background of a simple decision-making exercise – suitable for most ages and abilities. The idea is that students assess the need for a management plan for the area surrounding the monument, and then create a simple visualisation of their ideas using the free



tools that are part of Google Earth. More able students will appreciate that the issues surrounding the management of Stonehenge are both complex and contentious. Some students will be able to use ICT very creatively to communicate the outcome.

The recently published Action Plan for Geography KS3 support materials – found on the Geography Teaching Today website – include a scheme of work called Fantastic Places.

The scheme includes a unit entitled:



This lesson was originally devised as a kind of extension activity. The aims and objectives are as follows:

Key questions:

- What are management objectives for Stonehenge?
- What could a management plan look like?

Key concepts

(in relation to the 2007 revised NC):

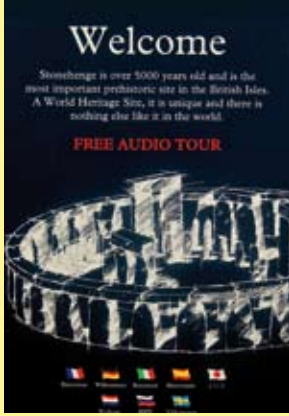
- Place
- Space
- Environmental interaction and sustainable development
- Physical and human processes
- Cultural understanding and diversity

Key processes:

- Geographical enquiry
- Graphicacy and visual literacy
- Geographical communication

Teaching and learning aims:

- Students will analyse the management issues at Stonehenge.
- They will use the free tools in the Google Earth software to plan and share their ideas for a management strategy for Stonehenge.



Resources:

The Google Earth file and further resources can be downloaded from Juicy Geography¹ www.juicygeography.co.uk/stonehenge.htm.

Supporting ideas and materials can be found on the Geography Teaching Today website².

Background to the issue:

Stonehenge is a prehistoric monument of worldwide importance. The standing stones were erected some 2 000 years ago, though the accompanying earthworks were begun more than 1 000 years earlier. There is evidence for human activity on the site dating back 8 000 years. The original purpose of the site remains open to speculation. It is widely agreed that the current visitor facilities require urgent improvement. In 1993 Stonehenge – which is owned by the nation – was criticised by Parliament’s House of Commons Public Accounts Committee as ‘a national



disgrace’. The visitor experience is marred by several problems. The site itself is located between two busy roads that easily become congested, and the visitor centre, while designed to be low profile, is unattractive and dated.



Eight years of consultation and planning culminated in the World Heritage Site Management Plan. Jointly developed by English Heritage®, The National Trust® and the Highways Agency – together with local and national government bodies – the Plan called for the building of a £67 million visitor centre at Countess Roundabout to replace the existing facilities adjacent to the Stones. Crucial to the plan was the closure of the A344 and a road scheme for the A303, including a tunnel to hide the part of the road that is visible from the Stones. The scheme also comprised roundabout improvements at Countess East and Longbarrow crossroads and a bypass for the village of Winterbourne Stoke. The A303 itself was to be upgraded to a dual carriageway. Visitors would park at Countess East and travel part way to the stones on a land train.

alternative plans

An alternative plan – suggested by the pressure group Heritage Action – makes the case for a simpler management strategy. The plan involves closing and grassing over the A344 road from its junction with the A303 up to the far end of the



visitors’ car park, decommissioning the pedestrian tunnel and moving the nearest fences much further away from the stones. The question of relocating the visitor centre is treated as a separate issue.



Current situation

Planning permission for the new visitor centre that is part of the Stonehenge Project plan was granted in March 2007. However, the government subsequently refused to sanction the A303 road scheme. This effectively means that the Stonehenge Project cannot proceed. English Heritage is very disappointed with the decision and intends to look at alternative ways to improve the setting of the stones.³ Heritage Action, on the other hand, was delighted, claiming that the Stonehenge Project ‘...aimed to improve the immediate setting of the stones but at the cost of vast collateral damage to the wider surrounding landscape, and was consequently strongly opposed by most archaeological and heritage bodies.’⁴ Both parties agree on the urgent need to improve the current situation. Given the combined failure of government, landowners and pressure groups to agree on a workable solution, the time has arrived for young people to have their say!

Learning activities

The lesson is best undertaken in small groups, each with a PC and access to Google Earth and Flickr®.⁵ If the students have not used Google Earth before, they would probably benefit from a pre-learning activity that teaches some basic concepts and skills. This is the time to encourage students to find their house or school and so on, and to practise navigating within the application. The vital skills include the creation of placemarks, how to use and organise the Layers and My Places panels, the use of the transparency slider tool and how to create polygons and paths. There is a simple visual guide to using Google Earth v4 at Juicy Geography.⁶ Google publishes a comprehensive user guide.⁷

A good way into the task is provided by the recent campaign to find the New Seven Wonders of the World.⁸ Stonehenge was one of the finalists but didn’t make it into the final seven choices. Could this be



due in part to the management of the site? Students could read the briefing paper from the Geography Teaching Today website, which describes the need for a management plan.⁹ There is also an introductory video that can be downloaded from Flickr.¹⁰

In the second phase of activity students inspect the Stonehenge site using the Google Earth file and the images and video clips. They should be able to identify and describe some of the management issues that impact the site. The Ordnance Survey map overlay helps them find the key locations mentioned by the World Heritage Site Plan. There should be an opportunity to allow some discussion to take place, possibly leading to whole-class agreement on a set of five priorities for a new management plan. This would support weaker groups before they embark on the next activity.

The students are now given free reign to design their own management plan. The outcome will be a KML file that includes:

- coloured paths to indicate the planned changes to roads/paths;
- coloured polygons to indicate the locations of visitor facilities; and
- placemarks that describe and explain their decisions.

Each of these elements can be fully annotated within Google Earth – either at the stage of creation or by selecting the feature from the Places panel, right-clicking and choosing Get Info. Some groups may benefit from being shown an exemplar outcome.

The lesson really lends itself to an assessment for learning approach, with lots of opportunities for collaborative work and questioning that will extend spatial-thinking skills.

The best work will demonstrate that all the resources, including the Ordnance Survey map, have been used to inform the outcome. The decisions will be carefully justified, realistic and achievable. It would be absolutely fine for students to base their decision on one of the existing plans, providing they explain their reasons. I recommend that teachers devise an



assessment mark scheme with class involvement, so that students understand what a good piece of work will look like. The class could save their Google Earth annotations into a shared folder to facilitate a peer assessment exercise.

EXTENSION IDEAS

The lesson may be concluded with some form of role play as groups present their ideas to each other. Some students may go further with Google tools and use SketchUp^{®11} to make a 3-D model of a new visitor centre. Students interested in exercising their 'pupil voice' may like to write to English Heritage or the Minister of State for the Environment with their ideas.

CONCLUSION

Google Earth is a great tool for spatial decision making, and this lesson can easily be adapted to other case studies and scenarios. There are plenty of opportunities to reference the key concepts and processes from the newly revised national curriculum as well as developing the citizenship angle. Hopefully, students will find it both challenging and enjoyable.

ACKNOWLEDGEMENTS

Jon Wolton at the **Royal Geographical Society** produced the briefing document and co-wrote the **Fantastic Places** work scheme as part of the Action Plan for Geography exemplar materials. **English Heritage** kindly gave permission for me to visit the site and take pictures and videos. **Ordnance Survey** provided the map extract for the Google Earth file.

LINKS:

Download the resource file from www.juicygeography.co.uk/stonehenge.htm
 Further resources can be found at the Geography Teaching Today website: <http://www.geographyteachingtoday.org.uk/ks3-resources/resource/fantastic-places/stonehenge-seventh-wonder-or-national-disgrace/>
Visit Stonehenge: <http://www.english-heritage.org.uk/server/show/nav.876>
The Stonehenge Project: <http://www.thestonehengeproject.org/history/partners/index.shtml>
Heritage Action: http://www.heritageaction.org/?page=heritagealerts_stonehenge

ENDNOTES

- 1 **Juicy Geography website:** <http://www.juicygeography.co.uk/stonehenge.htm>
- 2 **Geography Teaching Today website:** <http://www.geographyteachingtoday.org.uk/ks3-resources/resource/fantastic-places/stonehenge-seventh-wonder-or-national-disgrace/>
- 3 **English Heritage press statement:** http://www.thestonehengeproject.org/news/downloads/pressreleases/A303_announcement.pdf
- 4 **Heritage Action website:** http://www.heritageaction.org/?page=heritagealerts_stonehenge
- 5 **Ensure that access to Flickr is not filtered by the school network**
- 6 **Juicy Geography guides:** http://www.juicygeography.co.uk/blog/?page_id=5
- 7 **Google Earth user guide:** <http://earth.google.com/userguide/v4/>
- 8 **New Seven Wonders:** <http://www.new7wonders.com/classic/en/n7w/results/>
- 9 **Geography Teaching Today website:** <http://www.geographyteachingtoday.org.uk/ks3-resources/resource/fantastic-places/stonehenge-seventh-wonder-or-national-disgrace/>
- 10 **Introductory video:** <http://www.flickr.com/photos/juicygeography/2419404721/>
- 11 **SketchUp:** <http://sketchup.google.com/>