Royal Geographical Society with IBG

Fantastic Places

Geography Teaching Today

Lesson 1: Svalbard: People Place and Polar Bears

<table>
<tr><th>Key concepts</th><th>Range and content</th><th>Key questions and ideas</th><th>Teaching and learning activities</th><th>Resources</th></tr>
<tr><td>Place - understanding the physical and human characteristics of real places.

Space - knowing where landscapes are located.

Cultural understanding and diversity - appreciating the differences and similarities between people, places, and Environments.</td><td>Physical geography, physical processes and natural landscapes.

Managed environments.

Interactions between people and their environments, including the causes and consequences of these interactions, and how to plan for and manage their future impact.</td><td rowspan="3">Where is Svalbard?

What is Svalbard like?

Students describe the characteristics of the Arctic environment.

Students appreciate the need to protect diversity of crops and wild plants for the future in the event of a global disaster.</td><td rowspan="3">STARTER:
Mystery image of Polar Bears road sign. Can students deduce the place? (Could offer a selection of places to choose from / or play “Pin the Polar Bear sign on a map”) Show students the QTVR panorama**

MAIN ACTIVITIES:
Locate Svalbard on a map

Read Wikipedia article and make a short fact file e.g. language, population, currency etc.

Look at the photographs of Svalbard from the Cold Photo blog http://coldphoto.blogspot.com

Write an imaginary blog entry to accompany some of the pictures.

PLENARY:
Discuss the Svalbard Global Seed vault* with students. Why is Svalbard a good location?

EXTENSION:
Design the building to house the Global Seed Vault.</td><td>Downloads:

Blog template

Links:

Polar bear road sign from Wikipedia

Svalbard QTVR panorama

Svalbard article Wikipedia

Cold Photo blog / photos</td></tr>
<tr><td>Key processes</td><td>Curriculum opportunities</td><td>Assessment opportunities</td></tr>
<tr><td>Geographical enquiry - ask geographical questions, thinking critically, constructively and creatively

Geographical communication</td><td>Investigate important issues of relevance to the UK

Visualising information using GIS</td><td>Creative writing – could be peer assessed.

Whole class discussion.</td></tr>
<tr><td colspan="3"></td><td>Notes</td></tr>
<tr><td colspan="3"></td><td>* See web links for more information

**You will need to have QuickTime installed on your PC

http://www.apple.com/quicktime/download/</td></tr>
</table>

Web links:
Polar bear road sign picture: http://en.wikipedia.org/wiki/Image:Fareskilt_38.PNG
Svalbard 360 VR panorama: http://geoimages.berkeley.edu/worldwidepanorama/wwp1206/html/WitekKaszkin.html
Cold Photo blog http://coldphoto.blogspot.com (example page): http://coldphoto.blogspot.com/2007_03_01_archive.html
Svalbard Global Seed Vault info: http://en.wikipedia.org/wiki/Svalbard_Global_Seed_Vault

Fantastic Places

Lesson 2: Northern Lights

Key concepts	Range and content	Key question and ideas	Teaching and learning activities	Resources
Place - *unique physical and human characteristics, which can be interpreted and represented in different ways*. **Space -** *know where places and landscapes are located, why they are there, the patterns and distributions they create, how and why these are changing and the implications for people.* **Physical & human processes -** *understanding how sequences of events and activities in the physical and human worlds lead to change in places, landscapes and societies.*	*A range of investigations, focusing on places, themes or issues.* *The location of places and environments.* *Physical geography, physical processes and natural landscapes.*	What is the physical geography of Svalbard like? What glacial features can be recognised? Students identify glacial features of Svalbard.	**STARTER:** Northern Lights video from You Tube etc. Students will want to know the causes! **MAIN ACTIVITIES:** ***** Use Google Earth to identify some suggested locations for the film version of the Northern Lights. **These can be identified by placemarks created by students. **AND/ OR** Students could be given a **list of physical features** to identify. These could be highlighted using different coloured placemarks. (web links will help) Working in small groups, pupils could be given one feature to research and describe in further detail. The extra information can be added to the placemark. The finished placemarks can be sent to a shared folder for a peer assessment exercise for the whole group. **PLENARY:** Peer assessment of placemarks.	**Downloads:** Google Earth file on retreating glaciers List of physical features to identify in Google Earth **Links:** Northern lights video from You Tube Google Earth exemplar files from Juicy Geography Glaciers Online (Arctic Islands)
Key processes	**Curriculum opportunities**			**Assessment opportunities**
Geographical enquiry - *find creative ways of using and applying geographical skills to create new interpretations of place and space.* **Graphicacy and visual literacy –** *use data gathered from literature or information generated by GIS.*	*Use varied resources, including maps, visual media and geographical information systems* *GIS for mapping and visualising information* *Make links between geography and other subjects, including and ICT* and English			Peer assessment of Google Earth placemarks (students save placemarks to a shared folder to make this simple)
				Notes
				*This activity is recommended if the Northern Lights novel is a school set text or is a particularly popular book amongst the class. Northern Lights is being released as the film The Golden Compass Excerpts from final chapter of the Northern Lights text. (Needs to be read in advance of the lesson) **This lesson is written up in more detail at Juicy Geography More than one lesson may be needed

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Web links:

Northern Lights in Google Earth at Juicy Geography: http://www.juicygeography.co.uk/northernlights
Identification of glacial features: http://www.uwsp.edu/geo/faculty/lemke/alpine_glacial_glossary/glossary.html#erosionallandforms
Glaciers Online (Arctic Islands): http://www.swisseduc.ch/glaciers/arctic-islands/index-en.html

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Lesson 3: A day at the Racetrack

<table>
<tr><th>Key concepts</th><th>Range and content</th><th>Key question and ideas</th><th>Teaching and learning activities</th><th>Resources</th></tr>
<tr><td>Place - understanding the physical and human characteristics of real places. Developing ‘geographical imaginations’

Space - know where places and landscapes are located and why they are there.

Physical processes - understanding how sequences of events and activities in the physical a world leads to change in places and landscapes.</td><td>Physical geography, physical processes and natural landscapes.

Different parts of the world: This includes the location of places, key aspects of their changing geography and how places link with other places in the world across a range of different environments.

A range of investigations, focusing on places, themes or issues.

The location of places and environments.</td><td rowspan="3">Where is Racetrack Playa?

The Sliding Rocks of the Racetrack are a unique phenomenon.

What processes could be responsible for the Sliding Rocks?

The Racetrack is a location in Death Valley.

Aeolian processes in conjunction with water and possibly ice are responsible for the phenomenon of the Sliding Rocks.</td><td rowspan="3">STARTER:
Show an image of a sliding rock. Students suggest why the rock seems to have moved. Explain that nobody has ever witnessed, or filmed the rocks moving.
Locate Racetrack Playa on Google Earth
*Show video from http://www.slidingrocks.com/
A variation starter would be to play the soundtrack from the video and show a sliding rock picture. This combination works very well.

MAIN ACTIVITIES:
A mystery activity “Why does this rock move?
Students work in groups to answer the question.

A video from You Tube showing the Racetrack in wet conditions can be shown

PLENARY:
Groups present their ideas to the rest of the class. They can use evidence from the cards to back up their ideas as well as the images and Google Earth. The groups can challenge each other’s theories to arrive at a consensus.</td><td>Video:

from Sliding Rocks.com

Downloads:

Google Earth placemark

Mystery cards “Why does this rock move?”

Images:

Sliding rock images</td></tr>
<tr><td>Key processes</td><td>Curriculum opportunities</td><td>Assessment opportunities</td></tr>
<tr><td>Geographical enquiry - find creative ways of using and applying geographical skills

Geographical communication - communicate their knowledge and understanding using geographical vocabulary and conventions in both speech and writing.</td><td>Use a range of approaches to enquiries.</td><td>Presentation by groups at the conclusion of the Mystery activity

Notes

Google Earth can be used to illustrate the location of the Racetrack. Turning on the Geographic Web Layer is recommended, as is adjusting the elevation settings to 1.5 (under Tools / Options)

Thinking Through Geography by David Leat explains the use of Mystery style activities in the classroom.</td></tr>
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Web links:
You Tube video clip of flooding on Racetrack Playa: http://www.youtube.com/watch?v=u1hoiHvOeGc
The Sliding Rocks of Racetrack Playa http://geosun.sjsu.edu/paula/rtp/intro.html
The Roving Rocks of Racetrack Playa: http://www.larryo.net/RaceTrack.html
Sliding Rocks video http://www.slidingrocks.com/ (click on DV Video)

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Lesson 4: Stonehenge: Seventh Wonder or National Disgrace?

<table>
<tr><th>Key concepts</th><th>Range and content</th><th>Key question and ideas</th><th>Teaching and learning activities</th><th>Resources</th></tr>
<tr><td>Place – understand where it is, what it is like, how it became like this and how it might change.

Environmental Interaction and sustainable development - possible tensions between economic prosperity, social fairness and environmental quality.

Physical & human processes - understanding how sequences of events and activities in the physical and Human worlds lead to change in places, landscapes.

Cultural Understanding and Diversity - peoples' values and attitudes differ and may influence social, environmental, economic and political issues.</td><td>Human geography and managed environments.

Interactions between people and their environments, including causes and consequences of these interactions, and how to plan for and manage their future impact.

A range of investigations, focusing on places, themes or issues.</td><td rowspan="3">Is Stonehenge a "National Disgrace"?

How can Stonehenge be managed effectively for future generations?

What should be the management objectives?

What would a management plan recommend?

A new management plan is required for Stonehenge</td><td rowspan="3">STARTER:
Website:
http://www.new7wonders.com/
Discuss the nominations. A Google Earth tour can be viewed. Do students agree with the final choice? Should Stonehenge have been included?
Show image of Stonehenge
Outline the controversy. This will require the briefing document

MAIN ACTIVITIES:
Initially students should come up with a list of management objectives. This could be done as a whole class.
Working in groups, students create a management plan for the area. They can outline new roads and buildings using Google Earth's drawing tools, or use a map of the area.
More able students will be able to identify the problems and suggest strategies leading to desired outcomes.
Weaker students may need to select from a choice of three options and explain the reasons for their choice.

.PLENARY:
Presentations from groups</td><td>Links:

New 7 Wonders website

Google Earth Tour of nominations / finalists

Stonehenge image

Downloads:

Stonehenge Google Earth placemark

Briefing document</td></tr>
<tr><td></td><td></td><td>Assessment opportunities</td></tr>
<tr><td></td><td></td><td>Class discussion

A homework could be to justify own choice of 7 Wonders from the 21 finalists

Peer assessment of group presentations</td></tr>
<tr><td>Key processes</td><td>Curriculum opportunities</td><td></td><td></td><td>Notes</td></tr>
<tr><td>Geographical enquiry - analyse and evaluate evidence, presenting findings to draw and justify conclusions

Geographical communication</td><td>Use varied resources, including maps, visual media and geographical information systems

Investigate important issues of relevance to the UK and globally using a range of skills, including ICT.</td><td></td><td></td><td>There are some teacher's resources on the new 7 wonders website. The Wonder finalists map could be useful as well as the fact sheets. There is even an official song!

Use Google Earth's roads layers and path drawing tools to create alternative routes</td></tr>
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Web links:

New Seven Wonders of the World website: http://www.new7wonders.com/
Teaching resources for New 7 Wonders: http://www.webkwestie.nl/new7wonders/resources.htm
Google Earth tour of new 7 wonders nominated sites:
http://www.webkwestie.nl/earthquest/gepoints/new%207%20wonders/World%20Tour%20New%207%20Wonders.kmz
Washington post tour of new 7 wonders:
http://www.washingtonpost.com/wp-srv/photo/gallery/070313/GAL-07Mar13-67998/index.html
English Heritage - The Stonehenge project (The Published Route) http://www.thestonehengeproject.org/index.shtml
Heritage Action (Achievable Stonehenge): http://www.heritageaction.org/?page=heritagealerts_stonehenge
Save Stonehenge: http://www.savestonehenge.org.uk/homepage.html

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Lesson 5: The Totem Pole and the Toothfish

Key concepts	Range and content	Key question and ideas	Teaching and learning activities	Resources
Place - *understand tat every place has unique physical characteristics.* **Space -** know *where places and landscapes are located, why they are there, the patterns and distributions they create, how and why these are changing and the implications for people.* **Physical processes -** *sequences of events and activities in the physical and human worlds lead to change in places and landscapes.*	*A range of investigations, focusing on places, themes or issues* *The location of places and environment* *Physical geography, physical processes and natural landscapes* *Interactions between people and their environments, including causes and consequences of these interactions, and how to plan for and manage their future impact.*	How are sea stacks formed? Students understand why the Totem Pole is considered a "Fantastic Place" by climbers and others? Students explain the formation of sea stacks	**STARTER:** **Toothfish and sea stack PTT** – what is the connection? **Video of climbing Totem pole** **MAIN ACTIVITIES:** **How do sea stacks form?** Students create a piece of work to explain the processes involved. Students could add annotations to the **pre-prepared PPT.** There are may other possible options for a piece of creative work including the use of ICT to create an animation or claymation video see Curriculum opportunities. A second activity could involve a piece of creative writing about climbing the Totem Pole using a suitable photograph as inspiration. This could lead to the plenary. **PLENARY:** **Paul Pritchard story excerpt from Totem Pole text	**Links:** Climbing video Paul Pritchard excerpt **Images:** Toothfish picture Greenpeace protest picture **Downloads:** Toothfish and sea stack PPT Coastal Erosion PPT Coastal stack fact sheet Video of climbing Totem Pole
Key processes	**Curriculum opportunities**			**Assessment opportunities**
Geographical enquiry **Graphicacy and visual literacy** – *use information from literature, biographies, travel writing* **Geographical communication**	*Investigate important issues of relevance to the UK and globally using a range of skills, including ICT*			Assessment of main activity by teacher. There could be a checklist of key terms and ideas that need to be included. Students could read their poems
				Notes
				**Paul Pritchard suffered a serious accident while climbing the Totem pole. This is an excerpt from the book which tells of the accident and his road to recovery.

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Web links:

Patagonian Toothfish image: http://en.wikipedia.org/wiki/Patagonian_toothfish
Greenpeace Totem Pole protest image: http://www.greenpeace.org/international/news/totem-pole-protest
Excerpt from The Totem Pole by Paul Pritchard: http://www.paulpritchard.com.au/totem2.htm

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Lesson 6: The Earth as Art

<table>
<tr><th>Key concepts</th><th>Range and content</th><th>Key question and ideas</th><th>Teaching and learning activities</th><th>Resources</th></tr>
<tr><td>Place - understand that every place has unique physical and human characteristics, which can be interpreted and represented in different ways.

Space - know where places and landscapes are located, why they are there, the patterns and distributions they create, how and why these are changing and the implications for people.

Scale - appreciate different scales.</td><td>Physical geography, physical processes and natural landscapes

A range of investigations, focusing on places

A variety of scales, from personal, local, regional and national.</td><td rowspan="3">Can satellite images be interpreted artistically?

Students appreciate that satellite imagery can reveal Fantastic Places and allow viewing at a scale helpful for analysis.

Students create an artistic “Artwork Earth” image based on satellite imagery

Students complete a short piece of creative writing based on the image.</td><td rowspan="3">STARTER:
Show an exemplar Artwork Earth image. Can students come up with alternative captions? Show other examples of student work from Flickr.

Could also show some images from the NASA Earth As Art website.

MAIN ACTIVITIES:
Students use Google Earth to find artistic images of the Earth or alternatively Google Maps or the NASA Earth As Art site. They add a caption using the Flickr Motivator web site. There is a short guide on the Juicy Geography Google Earth blog.

Students can also create a piece of fictional writing about their image.

PLENARY:
Students choose their favourite images from the class, identifying the reasons for their choices. They could read their creative writing.</td><td>Links:

Exemplar Artwork Earth image and other examples on Flickr

Flickr Toys motivator website

Earth As Art web site

Google Earth

“How to” guide from Juicy Geography blog</td></tr>
<tr><td>Key processes</td><td>Curriculum opportunities</td><td>Assessment opportunities</td></tr>
<tr><td>Graphicacy and visual literacy - use satellite images

Geographical communication</td><td>Use a range of skills, including ICT.

Make links between geography and other subject

Use varied resources, including maps, visual media and geographical information systems</td><td>Display images in the classroom.

Students can write about their images creatively or research the landforms pictured.</td></tr>
<tr><td colspan="3"></td><td>Notes</td><td>This is an “awe and wonder” lesson, though it could be linked to lessons on physical geography, for example rivers, coasts glaciers or deserts since the features can be fantastic when viewed from space.</td></tr>
</table>

Web links:
Exemplar Artwork earth images (student work): http://www.flickr.com/photos/tags/artworkearth/
Earth As Art NASA site: http://earthasart.gsfc.nasa.gov/index.htm
Artwork Earth: How To guide from Juicy Geography: http://www.juicygeography.co.uk/blog/?p=163
Flickr Motivator site: http://bighugelabs.com/flickr/motivator.php