

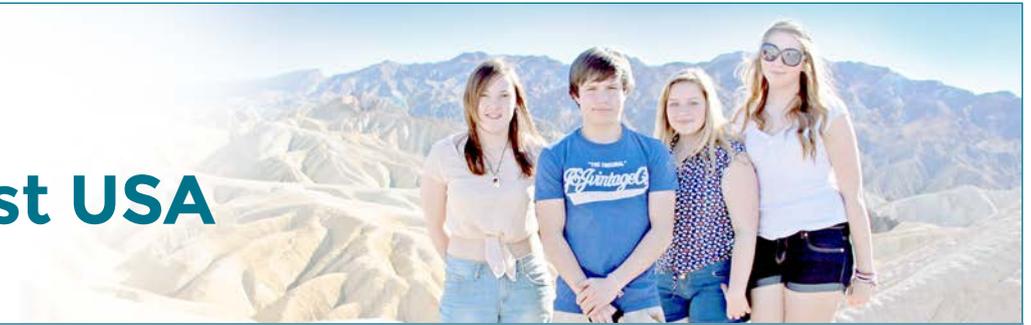
West Coast USA

Las Vegas



West Coast USA

Las Vegas



Introduction & Task 1



Las Vegas - water conflict and management

Las Vegas is a city in the middle of the Nevada Desert.

Average rainfall for this area ismm per annum and the average summer temperature is

This area is a water deficit area. As a result, water has to be brought in from outside the area through water canals from damming rivers such as the Colorado.

Task 1:

Whilst the coach drives into Las Vegas, make a tally of the water usage you see from the moment you enter the built-up area (your teachers will give you more detail and information on how this is to be organised).

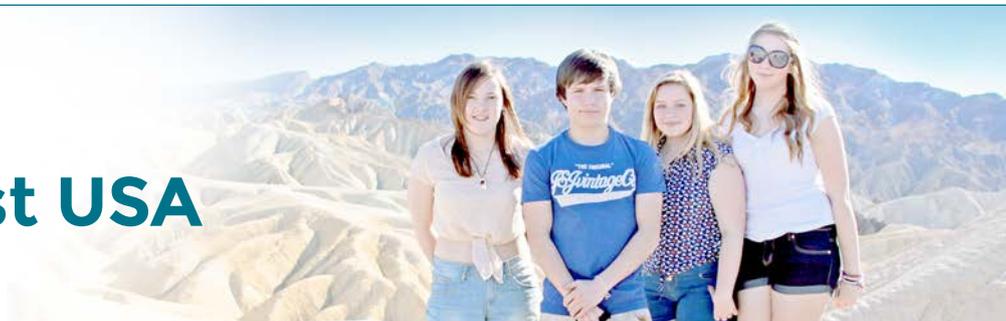
	Left-hand side	Right-hand side
Water fountains		
Swimming pools		
Ornamental pools/lakes		
Water sprinkling system		
Other 1 (please state)		
Other 2 (please state)		
Other 3 (please state)		

What words would you use to describe water use in Las Vegas? Circle any you feel apply.

excessive necessary unnecessary profligate conservative wasteful

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Las Vegas



Task 2

History of Las Vegas storyboard

Your teacher will read out a paragraph about the history of Las Vegas. You will then have 30 seconds to draw the information from the paragraph. You may use up to two words and dates for each drawing.

A large empty rectangular box for drawing.A large empty rectangular box for drawing.

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Teacher Fieldwork Resource Pack



West Coast USA

Introduction



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**KS3, GCSE and A level specification links
to fieldwork**

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Fresno County

Yosemite National Park

Mono Lake

Mosaic Canyon

Mesquite Sand Dunes

Death Valley

The Hoover Dam

Los Angeles

West Coast USA

Introduction



Activities Overview / KS3, GCSE and A level specification links to fieldwork

Programme Benefits

- Suitable for combined year groups with visits and activities relevant to both KS3, KS4 and A level
- Educational resources directly linked to “new look” Geography programmes of study, attainment levels 4-8
- Activity sheets are provided for pre-visit preparation and follow up, as well as for each visit option
- Visit options are excellent for the study of physical, human and environmental geography, as well as offering cross curricular opportunities

Key Stage 3 Relevance

Subject content

Teaching should equip pupils with knowledge about diverse places, people, resources and natural and human environments, together with a deep understanding of the Earth’s key physical and human processes. As pupils progress, their growing knowledge about the world should help them to deepen their understanding of the interaction between physical and human processes, and of the formation and use of landscapes and environments. Geographical knowledge, understanding and skills provide the frameworks and approaches that explain how the Earth’s features at different scales are shaped, interconnected and change over time.

Aims

The national curriculum for geography aims to ensure that all pupils:

- develop contextual knowledge of the location of globally significant places – both terrestrial and marine – including their defining physical and human characteristics and how these provide a geographical context for understanding the actions of processes
- understand the processes that give rise to key physical and human geographical features of the world, how these are interdependent and how they bring about spatial variation and change over time
- are competent in the geographical skills needed to:
- collect, analyse and communicate with a range of data gathered through experiences of fieldwork that deepen their understanding of geographical processes
- interpret a range of sources of geographical information, including maps, diagrams, globes, aerial photographs and Geographical Information Systems (GIS)
- communicate geographical information in a variety of ways, including through maps, numerical and quantitative skills and writing at length.

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Grand Canyon



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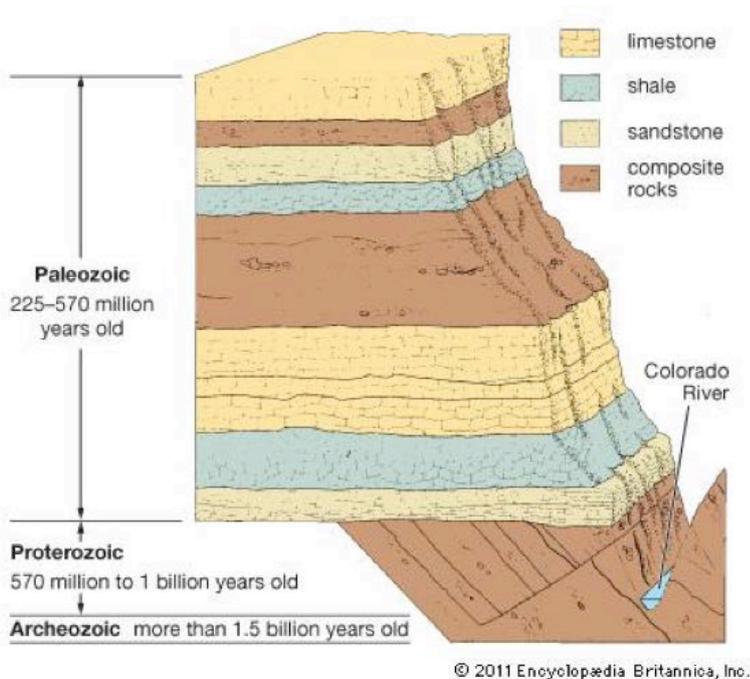
Grand Canyon



Introduction

Learning Objectives:

1. Students will have an understanding of how the Grand Canyon has formed
2. Students will observe different types of rock and understand how some rocks are more resistant to erosion than others.
3. To build up a case study of a tourist honeypot in the USA
4. To investigate the impact of tourism on a honeypot and how tourism is managed



The Grand Canyon is a steep-sided gorge carved by the Colorado River in the United States in the state of Arizona. It is largely contained within the Grand Canyon National Park, one of the first national parks in the United States. The Grand Canyon is made up of many layers of sedimentary rock which have been laid down over millions of years.

Plate tectonics caused the Pacific Plate to collide with and push the North American plate upwards. This helped to form the Rocky Mountains as Fold Mountains, as well as pushing Colorado up. The River Colorado was forced to erode vertically downwards towards sea level (the Base Level), a process known as rejuvenation.

The resulting canyon was created over a 5.4 million year period. The canyon is 277 miles long, ranges in width from 4 to 18 miles and attains a depth of over a mile (6000 feet).

Nearly two billion years of the Earth's geological history have been exposed as the Colorado River and its tributaries cut their channels through layer after layer of rock while the Colorado Plateau was uplifted.

The canyon began in the west, followed by another that formed in the east. Eventually, the two broke through and met as a single majestic rent in the earth, more commonly referred to as the "Grand Canyon Event" approximately 5.4 million years ago. The merger apparently occurred where the river today bends to the west, in the area known as the Kaibab Arch." The major form of the canyon was created by this event. The Colorado River continued to erode and form the canyon to the point we see it as today.

It is an excellent site for showing the different resistancy of rock types and river landforms such as meanders.

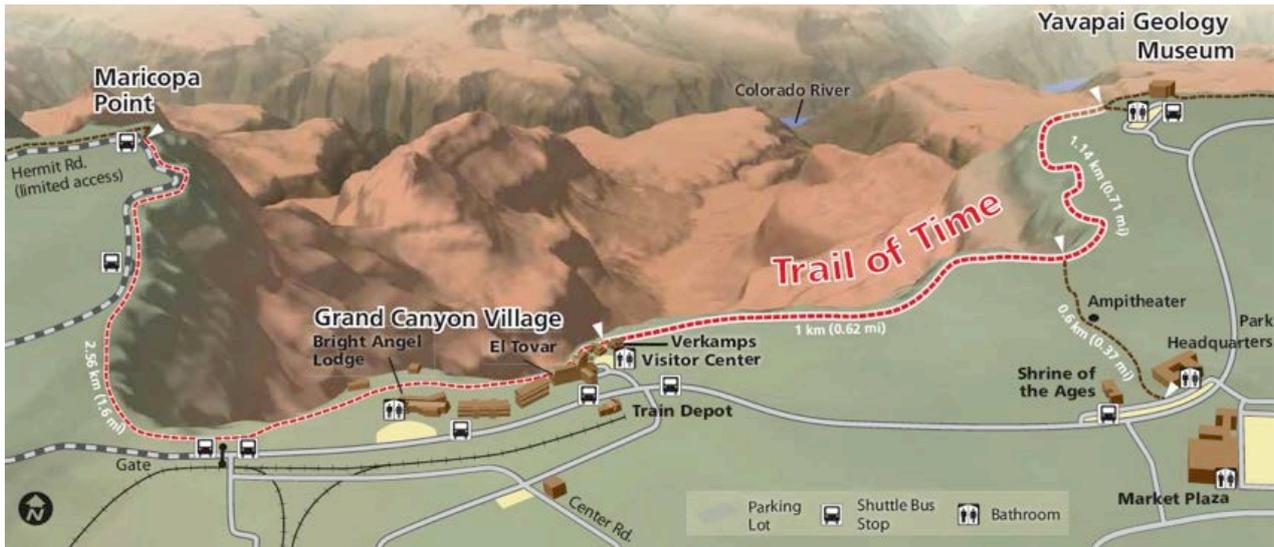
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Grand Canyon



Introduction

The trail of time: Grand Canyon



Source: http://www.trailoftime.org/use_it.html

Grand Canyon National Park | South Rim

DESERT VIEW DRIVE

LEGEND

- Paved Road
- Shuttle Bus Only
- Parking
- Restroom
- Trailhead
- Interpretive Trail
- Information
- Camping
- Picnic
- Food
- Gas Station
- Bookstore

Explore Desert View Drive
The less-crowded Desert View Drive, studded with breathtaking overlooks and un-named pullouts, gives you the chance to experience the ever-changing moods of Grand Canyon.

Navajo and Lipan Points Look across the canyon and toward the river to see the tilted layers of the Supergroup. These rocks are only visible from a few areas along the South Rim and tell an interesting geologic story.

The Watchtower Mary Colter gained inspiration through her travels in the Southwest for this impressive building reminiscent of ancient cultures' dwellings. Climb the 85 steps for a 360 degree view.

National Park Service
U.S. Department of the Interior
Grand Canyon National Park
Post Office Box 129, Grand Canyon, AZ 86023
(928) 638-7888
www.nps.gov/grca/

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Grand Canyon



There are a range of activities depending on what you wish to focus on at this location. The main topics of focus are either physical geography and geology or the Grand Canyon as a tourist honeypot.

Introduction and geology:

Task 1. Storyboard activity – this gives the students a general history to the geology and the formation of the Grand Canyon

Task 2. Annotated photograph – this again focuses on the geology of the Grand Canyon e.g. hard rock and soft rock types

Tourism and a honeypot location:

Task 3. Tourist/visitor questionnaire – this provides fieldwork data for coursework

Task 4. Tourist management tally – this provides fieldwork data for coursework

West Coast USA

Grand Canyon



Task 1: Storyboard activity on site - this activity gives the students an overview of the geological formation of the Grand Canyon.

Either from a viewpoint or the Trail of Time walk.

You need to read each paragraph out twice and then the students have 30 seconds to draw the paragraph. They are allowed 2 words per diagram (students have a hand out with boxes provided).

1. From a billion years ago layers of sediment started to be laid down. Some of these were laid down under the sea by decomposing sea animals forming limestone, others were sand dunes deposited in deserts by the wind and yet other layers were formed by lava flows. There are nearly 40 different layers of rock in the Grand Canyon.
2. The West Coast of America is an active tectonic zone. Here the Pacific oceanic plate is moving towards the Continental North American plate. The denser oceanic plate is sinking under the lighter continental plate but as they push against each other the North American plate has been pushed up over millions of years creating mountains in the past which were as high as the Himalayas.
3. As the raising of the land was happening at the same time as erosion removing rock, some of the historic layers have been completely removed and are no longer in the sequence.
4. Around 60-70 million years ago the Colorado River was formed from snowmelt as the Rocky Mountains were uplifted. Originally it flowed in a westerly direction down to the Pacific. However as tectonic uplift forced the Kaibab Plateau upwards it became diverted south and flowed into a large lake called Bidahochi.
5. The original river system on the west of the Kaibab plateau continued to flow and eroded backwards into the mountains (a process known as headwater erosion). Over time it eroded fully back through the Kaibab plateau and 'captured' the Colorado.
6. The Colorado erodes aggressively down through the many rock layers exposing them and leaving the Grand Canyon we know today.

Task 2: Complete an annotated photograph of the Grand Canyon.

Task 3: Tourist management tally.

Walk the Trail of Time. As the students walk the trail, they need to make a tally of the different management practices they see, e.g. warning signs, litter bins etc. There is space for them to add any management strategies which are missing from their table.

Task 4: Tourist questionnaires. Within the group try to interview a minimum of 25 people.