



Greed gone too far. Agreed?



Key Terms

Biome: global scale ecosystems

Ecosystem: biological community of interacting organisms and their non-living environment

Latitude: imaginary lines dividing the Earth from north to south

Longitude: imaginary lines dividing the Earth from east to west

Equator: the line of latitude found at 0° north and south

Altitude: height of land above sea level

Air pressure:

Flora: the plant life of a region or time

Fauna: animals of a particular region or time

Nutrient: a substance used by an organism to survive and grow

Nutrient cycle: how nutrients are moved around ecosystems

Litter: dead plant material

Soil: upper layer of earth made of broken down rock and decayed litter which enable plant growth

Biomass: all the flora and fauna in a biome

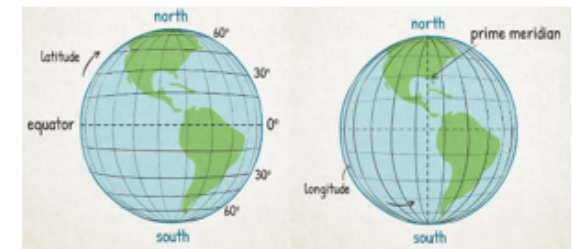
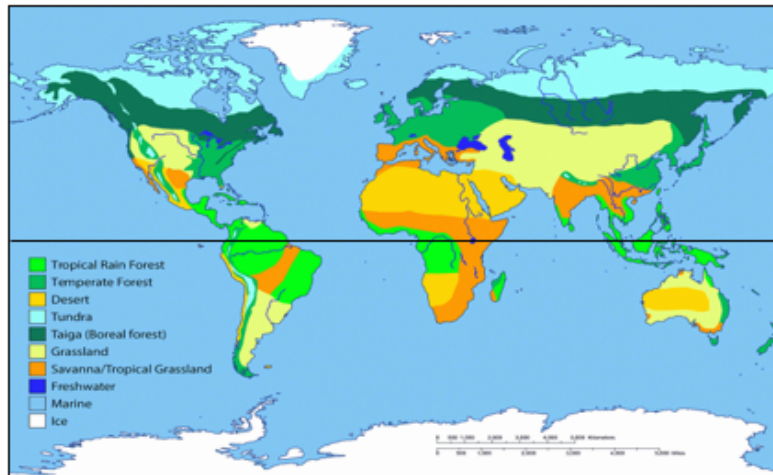
Deforestation: mass destruction of trees

Good: products provided by a biome e.g. bananas

Service: job done by a biome e.g. habitat, employment

Mitigation: action to reduce the severity of something

World biomes - The location of biomes is linked to latitude and altitude. The equator is found at 0° latitude and it is around this area we find tropical rainforests. At 90° north and south we find ice, also known as the polar biome.



Geographers like to describe **distribution**. This means the way something is spread out. You need to say what you see and use locational knowledge to help e.g. continent names, compass directions and extra information such as a key.

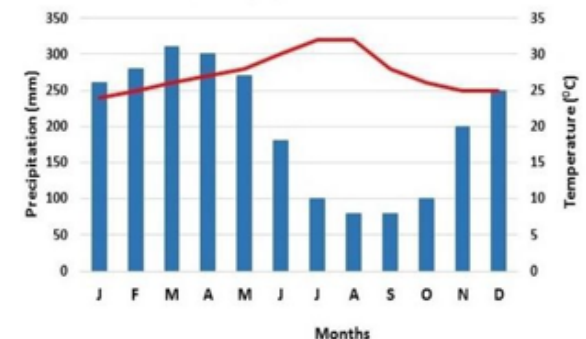
Tropical rainforest biomes

Tropical rainforests have high levels of rainfall all year round. This is because air rises at the equator (low pressure) and the moisture in the air condenses and forms large rain clouds. The temperature is always high.

Tropical rainforests are found in many countries including Brazil, Indonesia and Cameroon. More than 2/3 of the world's flora and half of the world's identified faunalive in tropical rainforests.

The Worldwide Fund for Nature (WWF) estimates we are losing 27 football fields of rainforest every minute due to deforestation

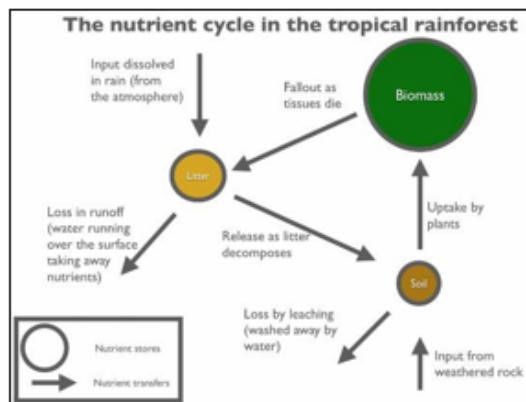
Climate graph for The Amazon Rainforest



Case Study: The Kilum Reserve, Cameroon

To manage and protect the tropical rainforest they have separated it into zones. The central zone is protected forest and the zones further out allow some forestry. For every tree chopped down, another tree is replanted.

Nutrient cycles



Nutrient cycle diagrams show most nutrients in the rainforest are stored in the biomass.

What causes deforestation?

The quick answer is money. The longer answer includes:

- To clear land to mine for gold, oil and rock
- To use the wood for construction, furniture and paper
- To use for farming especially of cattle to sell as beef
- To build houses for growing populations
- Road networks open up otherwise undisturbed areas

Impacts of deforestation

- Loss of species
- Removal of trees leads to flooding as trees absorb water
- Cutting down trees adds carbon to the air adding to climate change
- Cutting down trees means they cannot absorb carbon from the air
- 250million people rely on rainforests for subsistence (providing what is needed to stay alive e.g. food, water and shelter).
- Rainforests help to regulate global temperatures and rainfall
- Loss of nutrients leads to the soil turning into desert

Is dark tourism ethical?

Key Terms

Acute Mountain Sickness (AMS): an illness that can affect travellers at high altitudes (high above sea level)

Atrocity: an extremely wicked or cruel act

Commercialisation: the process of managing or running something principally for financial gain.

Communism: Communism is a political and economic ideology (way of thinking) based on equal distribution of wealth to all of society

Concentration Camp: a place in which large numbers of people, especially political prisoners or members of persecuted minorities, are deliberately imprisoned in a relatively small area with inadequate facilities, sometimes to provide forced labour or to await mass execution.

Dark tourism: is travelling to places associated with death and suffering

Ethics: moral principles that govern a person's behaviour

Gulag: a system of labour camps maintained in the Soviet Union from 1930 to 1955 in which many people died. They were generally found in inhospitable locations.

Holocaust: destruction or slaughter on a mass scale

Human rights: the basic rights and freedoms that belong to every person in the world,

Liquidator: civil and military personnel who were called upon to deal with the consequences of the nuclear disaster

Radiation: Energy given off by matter in the form of tiny fast-moving particles. Radiation can damage the DNA in our cells, cause sickness, cancers and death

Summit: the peak, or top of a mountain

Tourism: spending time away from home in pursuit of recreation, relaxation, and pleasure.

Can physical landscapes be dark tourist locations? Case study: Mount Everest.

Due to the commercialisation of Everest more and more people are putting themselves and others at risk. There are an ever increasing number of deaths on the mountain because the route is treacherous, including risks such as crevasses and avalanches.

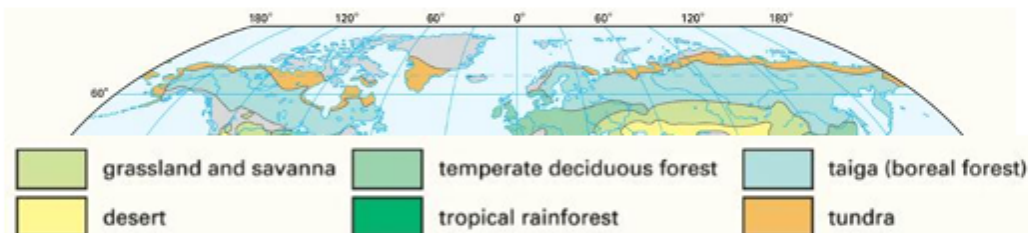


What examples of dark tourism are there?

Auschwitz (Poland). Ground Zero, Alcatraz (USA), Battle of Hastings (UK), slum tours in Dharavi, Mumbai (India)

What are the arguments for and against dark tourism?

For	Against
-draws attention to events that should never be forgotten. -it can provide many jobs and volunteers with work. -provides awareness and education of the incidents and disaster	-Tourists do not always show the correct behaviour and can be disrespectful -Horror is not entertainment -Some say you shouldn't have to pay to visit a place where your relatives or ancestors have died

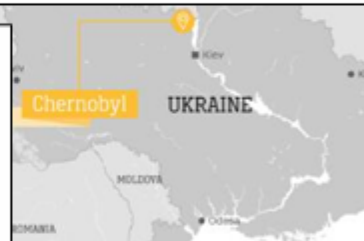


What do we know about Russia?

Russia is the largest country in the world. It is so large, it is spread across Europe and Asia (separated by the Ural Mountains), and spans nine time zones. It has borders with 14 countries. The physical geography of Russia has helped, but also hindered Russia's development. In the north of Russia, there is Tundra. Tundra is located between 60 and 80 degrees north of the Equator. It is the coldest of all biomes. In Vorkuta, a town 100 miles north of the Arctic Circle, a Gulag was turned into a "themed holiday experience in an attempt to generate revenue and preserve the area's history. However, human rights groups believe that they have the potential to glorify past human atrocities rather than educate visitors about those who lost their lives under the Soviet regime.

Why is North Korea considered a dark tourist location?

There is an extreme communist dictatorship with no political freedom and you cannot walk around freely- you have to follow a strictly controlled itinerary. Example sites are the DMZ and Mausoleum.



What happened in Chernobyl?

In the early morning of 26 April 1986, one of the four reactors at the Chernobyl nuclear power station ran out of control while engineers were running safety tests. A power surge of 100 times normal output led to a violent explosion and fire. Huge chunks of blazing, radioactive material were blasted into the air. The reactor burned for a week, spewing out radiation. All radioactive materials are carcinogenic—that is they can lead to cancer in people and animals. In all, more than 110,000 men, women and children were evacuated. This area, officially called the exclusion zone and known locally as the Dead Zone, is still more than three decades later, empty, except for a few hundred elderly people who have returned to their land.



Glaciation is cool



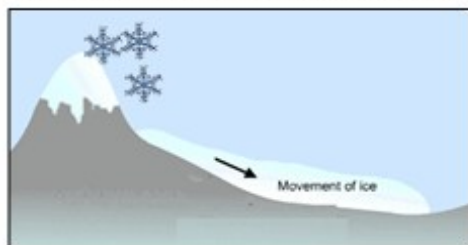
Key Terms

Glacial: when temperatures are significantly colder than today
Interglacial: when temperatures are like today, or warmer
Ice age: when large areas of the Earth's surface are covered with ice caused by a glacial cold period
Glaciers: a frozen river of ice made from compacted snow
Ice sheet: an area of glacial ice covering more than 50,000km²
Firn: snow that survives at least one summer melt season
Snowline: the height above which snow does not melt in the summer
Erosion: the wearing away of the land or rocks by the action of waves, water, ice and/or wind
Corrie: circular hollow on a mountainside
Tarn: a small mountain lake formed in a corrie
U-shaped valley: a flat bottom, steep sided valley formed by a glacier. Sometimes it is later filled by water to create a lake.
Arete: sharp ridge formed where two corries are back to back
Pyramidal peak: sharply pointed mountain peak formed where three or more corries are found back to back

How do glaciers form?

Glaciers form in cold areas above the snowline

1. Snow fills a hollow on the side of a mountain
2. Snow continues to fall and squashes the snow beneath
3. Air is squeezed out and the snow starts to convert to firn
4. The firn survives the summer melt and further snowfall continues to force out air
5. After about 100 years glacial ice is formed
6. Under gravity, the weight of the ice causes it to start slipping down the mountain
7. More snow falls providing a source of new ice to the glacier and enabling it to grow

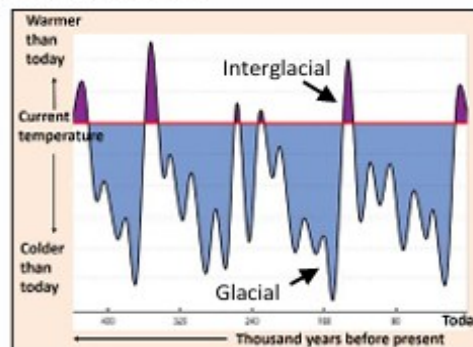


Landscapes tell stories. To read them properly we must always go beyond the front cover.

Ice ages throughout time

There have been five major ice ages since the Earth was formed 4.6 billion years ago. The most recent ice age started over 2.5 million years ago and ended around 12,000 years ago.

Glaciers and ice sheets grow when temperatures reduce meaning more of the planet's water is stored as ice.



During the last ice age, large ice sheets grew across North America, Europe and Asia. Ice covered up to 30% of the Earth's surface. Currently, ice covers 10% of the Earth's surface with Antarctica and Greenland home to 99% of the world's ice.

Ice coverage during the last ice age

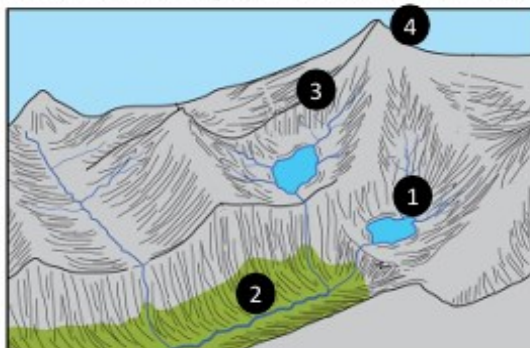
How do glaciers shape our landscapes?

Glaciers erode our landscapes in two ways:

- **Plucking:** water underneath a glacier freezes around lumps of rock. When the glacier moves, this rock is pulled away.
- **Abrasion:** rocks trapped in the base of the glacier scratch the landscape beneath

These processes of erosion change landscapes through creating landforms:

1. Corrie and tarn
2. U-shaped valley
3. Arete
4. Pyramidal peak



Case study: The Lake District

There is plenty of landscape and landform evidence that the Lake District used to be covered in ice. Examples include:

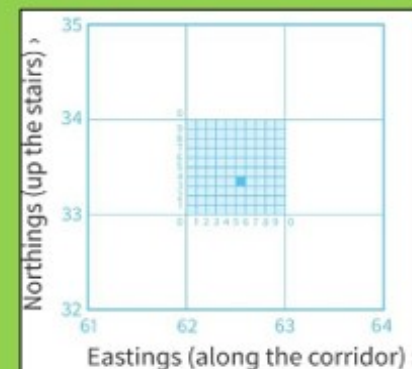
Arete:
Striding Edge

Corrie and tarn:
Red Tarn

U-shaped valley:
Ullswater



How do geographers find 6 figure grid references?



1. Bottom left corner
2. Name the easting
3. Leave a gap
4. Name the northing
5. Leave a gap
6. How many steps from the 62 to the next easting?
7. How many steps from the 33 to the next northing?

625, 333