

Is Antarctica important?

What would different stakeholders (groups) think about development in Antarctica?



**Governments** want to protect but also utilise (use) resources in areas like Antarctica

**Environmentalists** and Scientists want areas to be protected so they can carry out research.



**Tourists** want to visit unique areas and experience their landforms and wildlife.

A wilderness area:

A wilderness is an area of land that has been largely undisturbed by modern human development. Wilderness areas usually lack roads, buildings, and other artificial structures. They provide a natural environment for plant and animal species, and allow scientists to study healthy ecosystems. There are few true wilderness areas in the world and they vary in size, however their importance is becoming increasingly well documented.

Development in the wilderness:

Baffin Island is located in the Canadian territory of Nunavut, is the largest island in Canada and the fifth-largest island in the world. Most of the island is wilderness and contains some unique species.

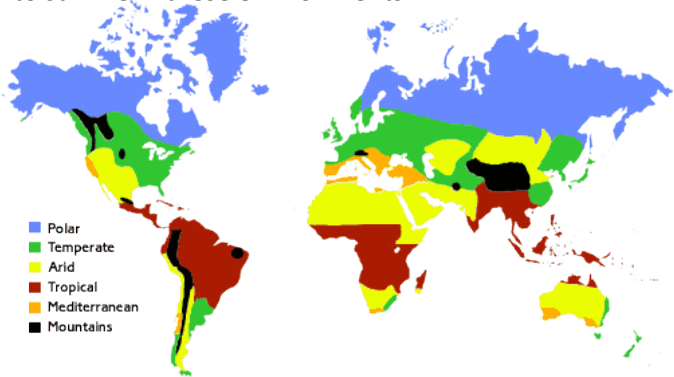
Can we develop Baffin Island in such a way that protects the environment and Inuit tradition but also helps to make money? Can Baffin Island be developed sustainably?

Year 8: How do flora and fauna survive in extreme environments?

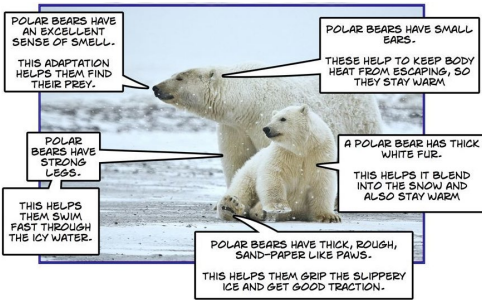
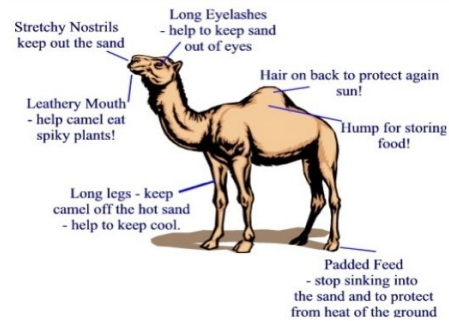
Key Questions:

- How many climatic zones are there and what are they called?
- How have animals adapted to hostile environments?
- Glaciers have been changing due to climate change, how has this impacted humans?
- What is Antarctica like?
- There is increasing human activity going on in Antarctica, can this be done in a sustainable way?
- Where is the Tundra? What is the climate like there?

The world can be split into different environmental zones, or biome, each with its own climate. Consequently each zone has animals (fauna) and plants (flora) that have adapted to survive in these environments.



How have animals adapted to live in extreme environments?



How can we structure an explanation? What key words may I need to use?

A **PEDL** paragraph is a great way of explaining your ideas and knowledge in answer to any question.  
**Point** – Make your point  
**Evidence** – Support your point with evidence and examples  
**Develop** – Explain how the evidence supports your point  
**Link** – link this back to the main point or to the next point

When explaining your points make sure you use connectives.

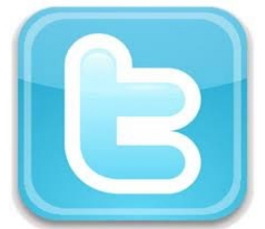
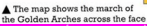
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| however...       | also            |
- See your contact book for more connectives.

Key words:

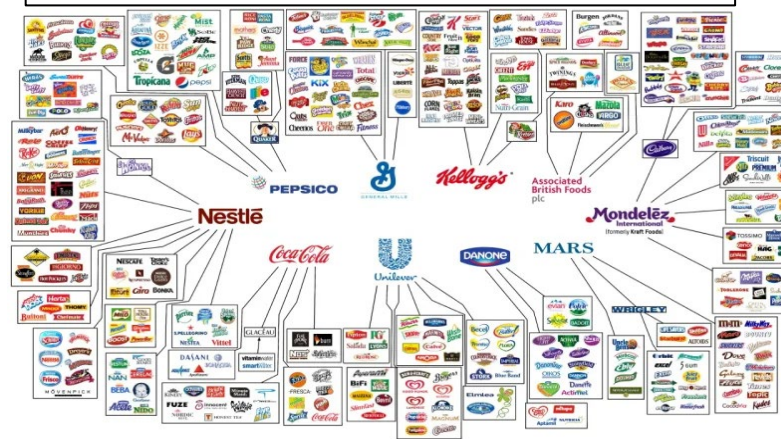
**Biome:** a region characterised by similar vegetation and climate (e.g. the desert)  
**Adaptation:** Plants and animals have special features to help them survive in the environment they live in.  
**Glacier:** a slowly moving mass of ice formed by the build up and compaction of snow.  
**Tundra:** The flat, treeless Arctic regions of Europe, Asia and North America, where the ground is permanently frozen.  
**Permafrost:** Permanently frozen ground, found in polar and tundra regions.  
**Inuit:** a member of an indigenous group of northern Canada and parts of Greenland and Alaska  
**Wilderness area:** A natural environment that has not been significantly modified by human activity.  
**Sustainable development:** Development that meets the needs of the present without limiting the ability of future generations to meet their own needs.

The increasing interconnectedness and interdependence of the world economically, culturally and politically.

## Good or bad?



NIKE is an example of a TNC, can you think of anymore?

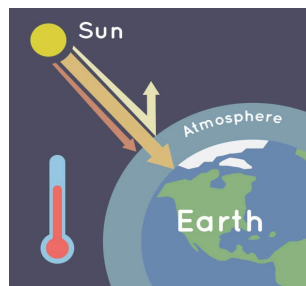


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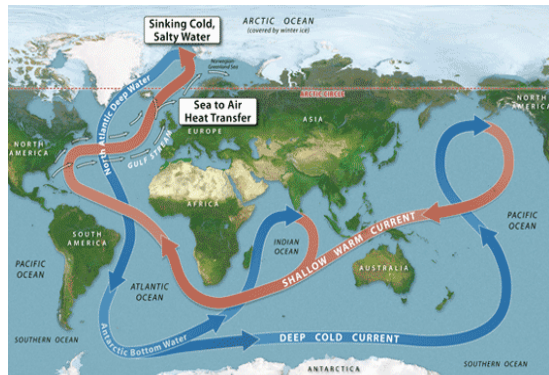
**Fairtrade:** a way of buying and selling products that makes sure that the people who produce the goods receive a fair price.



A diagram demonstrating the greenhouse effect



A diagram depicting the global conveyor belt



**What creates the different climates around the world?**

An underwater current circles the globe with a force 16 times as strong as all the world's rivers combined. This deep-water current is known as the **global conveyor belt**.

The Gulf Stream is part of this conveyor belt of water; warm salty water flows north from the Caribbean, sinks off Iceland, returns south along the seabed and rises again in the Caribbean.

**What is the difference between climate change and global warming?**

**Climate Change refers to** any change in global temperature and precipitation over time, due to natural or human causes. Whereas, global warming is the gradual warming of the Earth's atmosphere, which leads to climate change.

## Year 8: Climate Change

- Key Questions:**
- What is climate change?
  - What is the link between carbon dioxide levels and global temperature?
  - How has the greenhouse effect caused the earth to warm up?
  - What has caused global warming?
  - What are the effects of global warming?
  - How did Zak Slater break his ankle?
  - What can be done to reduce the impact of climate change?

**What causes the enhanced greenhouse effect?**

These images show how human activities add greenhouse gases to the atmosphere, leading to the enhanced greenhouse effect.



**What does the future hold?**

In order to adapt the the changing climate, for example increasing temperatures and rising sea levels, future developments need to be made more sustainable.

How could homes be more energy and resource efficient? How can we reduce our production of rubbish?

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See your contact book for more connectives.

**Key words:**

**Greenhouse gases:** Natural occurring gases such as Carbon Dioxide, Methane and Sulphur Oxides, which enables the greenhouse effect.

**Greenhouse Effect:** The process whereby greenhouse gases trap heat in the earth's atmosphere, causing the world to maintain its current climate..

**Global warming:** the gradual warming of the earth's atmosphere.

**Enhanced Greenhouse Effect:** The addition of extra greenhouse gases in the atmosphere cause an increased warming effect on the earth.

**Sustainable:** Understanding how to meet the needs of the present without compromising the needs of future generations to meet their own needs.

**Adapt:** to become adjusted to new conditions.

Why is the Amazon important?  
The Amazon is the source of many things we use in the UK including wood, metal, oil and food. Large areas of the rainforest are also provide many jobs for Brazilians in mining, logging and farming.  
The Amazon River is also used to produce Hydro Electric Power.

A number of groups are involved with the rainforest including the Brazilian government, the indigenous tribes, loggers, ranchers and conservationist such as Greenpeace.



Who do you think the biggest say and most power in the Rainforest?

How can the rainforest be managed sustainably?  
Rainforests need to be used sustainably. This means using the rainforest in a way that meets our needs without compromising the needs of future generations.

This can be done through eco tourism, selective logging and replanting, education and international agreements.

## Year 8: Tropical Rainforests

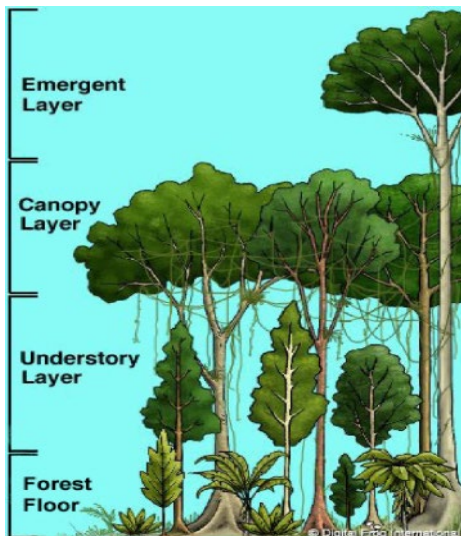
### Key Questions:

- Where are tropical rainforests located?
- What is the rainforest ecosystem?
- How do different tribes use the Amazon?
- Why is the Amazon considered important?
- What are the different uses of the Amazon rainforest and what impact does this have?
- Should the Amazon Rainforest be saved?
- Who killed Chico Mendes?

### Why does it rain a lot at the equator?

Tropical rainforest are located around the equator where it is warm and humid due to the warm air rising tropical rainforests get a lot of convectional rainfall.

What types of plants and animals would you find in each layer of the rainforest?



### Amazon Tribes

A number of different tribes can be found in the Amazon such as the Kayapo, Korubo and Panara tribes. The tribes use the rainforest in various ways such as for fishing, cattle farming and making medicine.

Each tribe also have a certain feature that makes them unique to the tribe that they belong to. This could include headdresses, face paint or jewellery made from animals bones and teeth.

How does your life compare to the indigenous people living in the Amazon?

A **PEEL** paragraph is a great way of explaining your ideas and knowledge in answer to any question.

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**Explanation** – Explain how the evidence supports your point

**Link** – link this back to the main point or to the next point

**When explaining your points make sure you use connectives.**

consequently....

as a result...

therefore...

due to this....

furthermore...

moreover

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also

See your contact book for more connectives.

### Key words:

**Humid:** When there is a high amount of water vapour in the air.

**Convectional rainfall:** When the land warms up, it heats the air above it. This causes the air to expand and rise. As the air rises it cools and condenses. If this process continues then rainfall occurs.

**Deforestation:** The removal of trees.

**Indigenous tribes:** Groups of people that are native to a certain region or environment.

**Logging:** The process of cutting and processing trees to produce timber.

**Cattle Rancher:** The practice of raising herds of animals on large tracts of land.

**Equator:** Geographic line that divides the Earth into the Northern and Southern hemispheres.

**Conservationist:** A person who works for the protection and preservation of the environment and wildlife.