Year - 8 - Topic - Unit 3 - How do physical processes affect cold environments?

1.
- Glaciers form from snow accumulating layer after layer. If there is not enough time between one snowfall and the next then a new layer will fall on top of existing snow, compressing it into small ice crystals.

- As the glacier grows with more and more snow added and previous layers are compressed into ice, it becomes heavy and starts to move down the mountain.
- The bottom layer of the glacier is meltwater which allows the glacier to move.

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2.

- As the glaciers moved they eroded the landscape through a process called Plucking. The rocks below the glacier become chipped and worn away over Time.

- Freeze thaw weathering has also shaped out upland landscapes in the UK. Water gets into cracks in rocks, freezes over night which causes the cracks to expand, and then melts during the day. This repeated freezing and melting will eventually widen cracks and cause rocks to fall apart.

3.
- A corrie is a glacial landform formed through erosion. A corrie is a deep armchair shaped hollow found on mountain sides.

- When two corries develop side by side or back to back they found an arete.

- When three or more corries form on all sides of a mountain, a pyramidal peak is formed.

- During glaciation, the rock in the valley sides is torn away causing a U-shaped valley known as a Glacial Trough.

4.
- Deposition landforms are created when a glacier loses the ability to carry material.
- Drumlins are egg-shaped hills composed of glaciated material of different shapes and sizes. They can be 100m or more in length and tell us the direction of glacial movement in the past.
- Many landforms formed from glacial erosion, transportation and deposition can be seen in the Lake District, UK.

5.
- There are many economic activities taking place in glaciated upland areas.

- Agriculture (farming) takes place such as animal grazing and forestry.

- Tourism is popular in glaciated upland areas. They attract walkers, photographers and mountain climbers.

- Quarrying also takes place. This includes rocks such as Lake District slate.

6.
- Polar environments are found inland, far from the sea.
- Examples of Polar environments include Greenland, Northern Canada and Antarctica.
- The average monthly temperature in polar regions is always below freezing which allows snow and ice to accumulate over time.
- Tundra environments are found south of the Ice Caps in the Northern Hemisphere.
- Tundra does not have permanent ice cover but does experience cold temperatures all year round.

7.	8.
- Many different animal species live in cold climate regions. - Snowshoe rabbits have white fur. This means they cannot be easily seen against the winter snow. - Caribou and musk fox have two layers of fur to help protect them against the cold. They also have strong hooves to help them break through ice to find drinking water. - Shrubs, mosses and lichens are also found in cold environments as plant species.	- Cold environments such as Alaska have many opportunities for development such as for fishing, mining, tourism and energy production such as geothermal energy. - Cold environments also have a number of challenges for development. These include accessibility (a lack of roads and travel cut off through snowfall and ice), and melting permafrost leading to buildings becoming at risk of falling down.

9.
- The use of renewable energy sources such as solar and wind can be used to reduce the level of Carbon Dioxide in the atmosphere and therefore the threat of climate change.

- International agreements between countries can be used to reduce Carbon Dioxide levels.

- Limiting tourist numbers to cold environments can help to preserve the wildlife and surrounding ecosystem.

- Some scientists argue that cold environments such as the Arctic and Antarctica cannot be saved from climate change and harm is permanent. Over the next 100 years the temperature in the Arctic is projected to rise by between 4-7° C

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1.
- In 2022, over 50% of the world's population live in towns and cities (Urban areas).

- An urban area is a town or a city.

- A rural area is the countryside.

- Rural to urban migration is the movement of people from urban areas to rural areas.

- A MegaCity is a city with a population over 10 million people or more.

- Urbanisation is the process of an increasing percentage of the population living in urban areas.

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2.
- Rio de Janeiro is a city in Brazil.

- Brazil is in South America.

- Rio is a popular tourist destination due to beaches, hot weather and Christ the Redeemer, one of the modern 7 Wonders of the World.

- Rio has grown rapidly as a result of migration from other areas of Brazil and abroad.

- Almost 25% of Rio's population live in Favelas - These are slum areas, often built on hillsides.

3.
- Houses in favelas are often poorly built out of makeshift materials.

- They often lack electricity and clean, running water.

- Unemployment rates are very high in favelas, much higher than everywhere else in Rio.

- Favelas are often built on steep hillsides.

- Favelas experience high crime rates, particularly drugs and gun crime.

4.
- London is the capital city of England and has a population of just short of 9 million. London is expected to be a MegaCity by 2030.
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- London has experienced a growing population due to migration and a large student population.
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- Areas such as Shoreditch and the Isle of Dogs have benefitted from regeneration.
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- Regeneration aims to improve and change the function of areas.

5.
- As a city grows it faces challenges in crime, housing, education and health.

- A growing population means that there is a higher demand for housing, which can be very expensive in cities such as London.

- This can lead to homelessness, poverty and higher crime rates.

- Unemployment can also be high in cities as the demand for jobs is higher than the number available.

6.
- Air pollution and smog are an issue in large cities such as London.

- High amounts of traffic can lead to pollution. Old cities which were not designed with wide roads for cars can mean that traffic congestion is heavy and frequent.

- Waste and water pollution are also an issue. Many cities do not meet recycling targets and more waste can end up going to landfill. This can have long term impacts on the environment, habitats and the atmosphere.

7.
- The UK consists of 4 countries - England, Scotland, Wales and Northern Ireland.

- London is the capital city of England and the has the largest population of any UK city.

- The north/side divide is the theory that unemployment, education and wellbeing are better in the south of the UK than in the north.

- Employment, wages and access to health care and education are all indicators of wellbeing.

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Year - 8 - Topic - Unit 5 - Why do countries develop at different rates?

1. ● Development refers to a country progressing. Development will improve peoples lives through infrastructure, housing, healthcare and education. ● Countries can be classified into 3 categories of development - Low Income country (LIC), NEE (Newly Emerging economy) and HIC (High income country) .	2. ● In a highly developed country you would expect to see access to clean water and electricity, healthcare and doctor access, children spending many years in education and good transport links. ● In a poorly developed country you would expect to see a lack of clean and safe drinking water, high levels of people living in poverty, lack of education and poor health care resulting in a low life expectancy.
3. ● A development indicator tells us how developed a country is. ● Development indicators can include literacy rate, the percentage of people with access to clean water and life expectancy. ● Wealth can also be used as a development indicator. This can be in the form of Gross Domestic Product (GDP). This is the value of a country	4. The development gap refers to the difference between the development levels of different countries around the world. **The development gap is caused by many reasons.** Historical reasons include colonialism and the spread of Empires. Geographical reasons include climate, location near the sea and poor soil. Health and education reasons include disease, lack of doctors and lack of investment in hospitals. Conflict and corruption can hinder development.
5. ● Gender inequality refers to people been treated differently and given different opportunities because they are either male or female. This could be for example paying men more money than women for doing the same job or allowing men to vote but not women.	6. Many people migrate, often undertaking dangerous journeys to try to escape Poverty. At least 250,000 migrants crossed the Mediterranean Sea from North Africa to Europe in 2014. At least 3500 died whilst making this journey, most by drowning.

● By promoting gender equality it is believed that a country can reduce hunger, improve health and benefit families.	Many people make this journey across the Mediterranean Sea to escape poverty, and help their families. Others are fleeing conflict in the Middle East from countries such as Syria.

7.
Bilateral aid is when the government of one country provides aid to the government of another country.

Non-governmental aid is provides by charities (NGO's) and usually funded by the public.ActionAid is an example of an NGO.

From 2001 to 2015 the United Nations (UN) set up eight millennium goals and a further 17 have since been added.

The millennium goals aim to reduce poverty, promote gender equality, promote sustainable communities and taking action against climate change.

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