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**Knowledge Rich Curriculum Plan**

Geography Y9



| **Unit: Changing Climates and the Arctic** |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* |
| **How can we distinguish between weather and climate?** | * Students will know that the weather describes the current atmospheric conditions (TLAG)
* Students will know that climate is the average weather conditions in a region, for a longer period of time (TLAG)
* Students will know that climate data is shown using a climate graph.
* Students will know how to interpret climate data by analysing Oban in the UK (SKILLS) (PLACE)
 | Weather | * Students will know that a climate graph shows temperature and precipitation
* Students will know that a tornado is a type of extreme weather than impacts the USA
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| **What influences climate?** | * Students will know that climate is influenced by 4 factors: Latitude, Relief, Prevailing Wind and the ocean
* Students will know that the prevailing wind influences the climate of the UK according to its characteristics. The South of the UK is warmer partly due to tropical winds rather than polar winds (PLACE)
* Students will know that temperature reduces with altitude, which influences the climate of the area
* Students will know that countries at the equator have warmer climates because solar radiation is more concentrated there (CONNECTION)
* Students will know that the ocean keeps the land cool in summer, and warm in winter
 | LatitudeRelief | * Students will know that the prevailing wind is the dominant direction in which the wind blows in
* Students will know that latitude is the angular distance of a place north or south of the equator
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| **Is Earth’s climate only changing now?**  | * Students will know that climate change refers to a change in global or regional climate patterns
* Students will use a line graph to identify that the Earth's temperature has fluctuated over the past 500 million years (SKILLS)
* Students will know that the volcanic activity that created the Siberian Traps triggered volcanic winters and long-duration climate warming.
* Students will know that larger eruptions can reduce solar radiation reaching earth, and chance atmospheric circulation patterns.
 | Regional Volcanic Eruption  | * Students will know that an ice age is a long-term reduction in the Earth’s surface and atmosphere temperature.
* Students will know that climate is the average weather conditions in a region, for a long period of time.
* Students will know that volcanic eruptions release ash, gas and dust.
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| **What is anthropogenic climate change?** | * Students will know that anthropogenic climate change refers to the theory that humans are influencing climate change (TLAG)
* Students will address the misconception that 'greenhouse gases are bad for the planet' by exploring the natural greenhouse effect.
* Students will know that the enhanced greenhouse effect is the disruption to the earth's equilibrium caused by increasing concentrations of greenhouse gases. (CONNECTION)
* Students will know that the three drivers of anthropogenic climate change are fossil fuels, agriculture and deforestation (CONNECTION Y7)
 | Anthropogenic  | * Students will know that human population has increased demand for resources.
* Students will know that deforestation is the action of clearing a wide area of trees (Y7)
 |
| **How am I contributing to climate change?**  | * Students will know that climate change causes can be measured on a local, as well as national scale.
* Students will know that carbon footprint refers to the amount of C02 that is released from the action of individuals, organisations and communities.
* Students will know that carbon footprints are influenced by choices of travel, food, consumer items and domestic habits.
* Students will learn that reducing beef consumption is a significant factor in reducing carbon footprint.
 | Carbon Footprint Significant  | * Students will know that climate change is anthropogenic
* Students will know that agriculture plays a key role in greenhouse gas emissions
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| **How will climate change impact Africa?** **Include drought as a concept – link to weather and Africa** | * Students will know that temperatures in Africa are expected to increase above the global mean.
* Students will know that drought is expected to impact large areas of the Horn of Africa, in particular Somalia, Kenya and Ethiopia.
* Students will know that locust swarms have been forming in Chad, northern Mali and northern Niger, which have the potential to reduce crop yields.
 |  Drought  | * Students will know that Africa has a high proportion of countries classed as LIC's (Low income countries)
* Students will know that a crop yield the yield is a measurement of the amount of a crop grown, or product such as wool, meat or milk produced, per unit area of land.
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| **How is climate change impacting the Arctic?**  | * Students will know that sea level rise results from the melting of arctic land ice, not ocean ice.
* Students will know that sea level rise will lead to the loss of arctic ecosystems.
* Students will know that changing ocean conditions will lead to a reduction in plankton levels, and subsequent ecosystem damage.
* Students will know that climate change and ice melting may open up new potential fishing grounds.
 | Ecosystem  | * Students will know that climate change will impact weather patterns in a location.
* Students will know that arctic ecosystems are fragile, and reliant on plankton.
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| **How is climate change creating positive feedback cycles in the Arctic?**  | * Students will know that a positive climate feedback system creates change, which in turn creates enhanced change.
* Students will know that Arctic ice is important as it acts as an 'air conditioner' for the planet.
* Students will know that the Albedo effect is where light surfaces reflect more light than dark surfaces. In the Arctic, this acts as a way of reflecting solar radiation back into space, cooling the planet.
* Students will know that permafrost is a thick sub layer of soil that remains frozen all year, and its melting can cause the release of large amounts of methane gas.
 | Positive Feedback Cycle | * Students will know that the colour black absorbs more heat than the colour white (science link)
* Students will know that the earth is warmed by incoming solar radiation.
 |
| **What opportunities has melting sea ice created?**  | * Students will know that between 1984 and 2019, arctic sea ice levels have reduced dramatically.
* Students will know that sea ice melting may offer the opportunity for new shipping routes in the Arctic.
* Students will know that melting arctic sea ice may open the opportunity for oil reserve extraction.
* Students will know that while oil extraction may have economic benefit, there are large environmental costs such as oil spills being almost impossible to clean in the region.
 | Dramatically Extraction  | * Students will know that shipping routes are an important aspect of global trade and globalisation.
* Students will know that sea ice is melting rapidly due to the albedo effect.
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| **Unit 2: Geographies of Conflict**  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* |
| **L1: To investigate the terminology used in conflict writing**  | * Conflict - Conflict arises from disagreement between two parties where parties perceive a threat to their needs and interests.
* War -To be classified as a war, the conflict must be widespread, intentional, and declared. It requires mobilization of personnel and fighter or soldiers moving to front positions to defend territories.
* Ideology - a system of ideas and ideals, especially one which forms the basis of economic or political theory and policy.
* Students will know than an international conflict is India Pakistan Kashmir conflict which has led to three full-fledged wars between these two countries and remains a potential flash point.
* Civil War- a war between citizens of the same country.
* Students will know that civil war in South Sudan is an example where conflict led to war.
 | Conflict Civil War | * Geopolitics - Relating to politics, especially international relations, as influenced by geographical factors.
* Students will know that geopolitical conflict occurred in the Arctic region.
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| **L2: To explore global conflict trends since 1946.**  | * Students will know that trends can be positive, negative or fluctuating.
* Fluctuating - rising and falling irregularly in number or amount.
* Students will be able to describe the global trends in armed conflict.
* Students will be able to describe the trends in global refugee numbers.
* **Refugee**: a person who has been forced to leave their country in order to escape war, persecution, or natural disaster.
* Students will be able to identify the distribution of state fragility, which is denser in Africa, the Middle East and Asia.
 | Fluctuating Refugee  | * Students will know what a line graph is, and how to read them effectively.
* War - a state of armed conflict between different countries or different groups within a country.
 |
| **L3: The explore the root causes of geopolitical tension**  | * Students will know that many African countries are prisoner of the political geography created by European powers, in particular the drawing of political boundaries.
* Political boundaries: an imaginary line separating one political unit, such as a country or state
* Students will know that as the population grows closer to its nine billion projection, it will be the depletion of resources which will be the main cause of war.
* Students will know that climate change will exacerbate these issues.
 | Exacerbate Climate Change | * Students will know that the ‘scramble for Africa’ and subsequent colonialism had negative impacts on the continent.
* Students will know that population growth can cause depletion in resources such as food or water
 |
| **L4: Darfur: The first climate change war?** **(Reading)****‘Scorched”, The Guardian**  | * Students will know that the current conflict was triggered when Darfurians launched a revolt against the central government, which fought back by unleashing the Janjaweed.
* Students will know that real roots of the disaster stretch back to the mid-1980s when a ferocious drought and famine transformed Sudan and the whole Horn of Africa.
* Students will know that climate change will lead to more conflicts like Darfur, as groups who have coexisted until now begin to feel a sense of urgency over the diminishing resources of water and land.
 | DiminishingDrought Famine  | * Students will know that physical factors can cause conflicts
* Students will know that climate change refers to long term changes in global weather patterns.
* Students will know that a drought is a period of time when an area or region experiences below-normal precipitation.
* Students will know that famine is extreme scarcity of food.
 |
| **L5 How can Geography influence Conflict?****Geopolitics in the Arctic** | * Geopolitics is the study of how geography affects politics and international relations.
* In the Arctic, nations such as the USA and Russia are all competing for the ‘now exposed’ natural resources in the Arctic e.g. gas/oil.
* In the future, this could result in full blown conflict, as nobody ‘own’s the Arctic.
 | Geopolitics | * Students will know that between 1984 and 2019, arctic sea ice levels have reduced dramatically.
* Students will know that sea ice melting may offer the opportunity for new shipping routes in the Arctic.
* Students will know that melting arctic sea ice may open the opportunity for oil reserve extraction.
* Students will know that while oil extraction may have economic benefit, there are large environmental costs such as oil spills being almost impossible to clean in the region.
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| **L6: How can Geography influence conflict?** **Desert Warfare: Afghanistan and Iraq** | * Students will know that relief such as mountains, unstable land and low-lying land can influence conflict in a positive and negative way.
* Students will know that in Iraq, the desert biome impacted coalition troops.
* Students will know that the flat, even terrain encouraged a rapid pace of advance, while the lack of cover favoured coalition forces because their equipment has a greater range.
* Students will know that desert climate impacts conflict, such as cars overheating due to high daytime temperatures.
 | ReliefBiomeTerrain  | * Students will know that relief is the physical shape, configuration or general unevenness of a part of the Earth's surface
* Students will know that a biome is a large area characterized by its vegetation, soil, climate, and wildlife.
* Students will know the global location of the desert biome.
 |
| **L7: How can Geography influence conflict?** **“The Resource Curse”** | * Students will know that the DRC home to about 60% of the world’s known cobalt reserves, an essential component of lithium-ion batteries used to power electric vehicles.
* Students will know that the mineral was exposed during the formation of the African Rift Valley.
* Students will know that government corruption has led to the profits from the mineral leaving the country.
* Students will know that this has had a negative impact on development, in particular life expectancy and literacy rate.
 | Corruption   | * Students will know that the African Rift Valley was created by divergent plate movement.
* Students will know that natural resources are materials from the Earth that are used to support life and meet people's needs.
 |
| **L8: How can Geography influence conflict?** **“Russia-Ukraine Crisis”** | * Students will know that the great expanse of flatland that is the European Plain is an inviting territory for the invaders who have attacked Russia from there repeatedly through history.
* Students will know that historically, ‘buffer zones’ were created as a form of protection.
* Students will know that two of Russia’s chief preoccupations—its vulnerability on land and its lack of access to warm-water ports—came together in Ukraine in 2014.
* Students will know that the 2022 crisis is born of physical factors, along with the ideological conflict with NATO.
 | Vulnerability  | * Students will know that relief such as mountains, unstable land and low-lying land can influence conflict in a positive and negative way.
* Students will know that Russia’s land mass is predominantly covered by tundra biomes.
* Students will know that Russia’s population is distributed unevenly to the west.
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| **Unit: Global Conflict Evaluation: Migration**  |
| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* |
| **L1: What is migration?** | * Students will know what migration is and what global current migration trends look like.
* Migration: is the movement of people from one place to another.
* Students will know how migration has impacted the UK populations demographics.
* Students will know the main source countries of migrants into the UK as well as the main countries UK citizens migrate to.
* Students will know that census data is used to track population changes such as international migration.
* Students will know the difference between national and international migration.
 | Migration NationalInternational  | * Rural-urban migration has occurred in China due to push and pull factors.
* Push factors include war/natural disasters.
* Pull factors include job and education opportunities.
 |
| **L2: How do migrants vary?** | * Students will know about the different types of migrants including; economic, forced, short term, long term and climate migrants.
* Students will know the difference between the term’s emigrant and immigrant.
* Students will know the reasons why people migrate and why some countries have higher immigration rates than others.
* Students will know what push and pull factors are in relation to migration.
* Emigrant: leaving one country to move to another.
* Immigrant: Moving into a new country.
 | EmigrantImmigrant | * Students will know what migration is and what global current migration trends look like.
* Migration: is the movement of people from one place to another.
* Students will know how migration has impacted the UK populations demographics.
* Push factors include war/natural disasters.
* Pull factors include job and education opportunities.
 |
| **L3: How does migration affect people and places?** | * Students will know that there are positive impacts of migration for both the source and host countries facing migration.
* Students will know that there are negative impacts of migration for both the source and host countries facing migration.
* Source country: Where migrants move from.
* Host country: Where migrants move to.
* Students will know that the UK has had positive impacts such as skills gaps filled and cultural enrichment, whilst recognising negative impacts such as pressures on housing availability and language barriers.
 | SourceHost | * Emigrant: leaving one country to move to another.
* Immigrant: Moving into a new country.
* Students will know the main source countries of migrants into the UK as well as the main countries UK citizens migrate to.
 |
| **L4: What is economic migration?** | * Students will know the reasons for economic migration to the UK.
* Economic migrant: Choses to move in order to improve quality of life by gaining a better paid job.
* Students will know that migration from European countries, particularly from Poland and Romania has been for economic reasons.
* Students will know how European migrants contribute to the UK economy and how this has been impacted by global issues such as Covid-19 & Brexit.
* Brexit: Withdrawal of the United Kingdom from the European Union at 31 January 2020.
 | Economic migrantBrexit | * Migration: is the movement of people from one place to another.
* Students will know how migration has impacted the UK populations demographics.
 |
| **L5: What is a refugee?** | * Students will know the reasons for people becoming refugees and how these people come to seek asylum in countries such as the UK.
* Students will know that citizens of Syria have fled due to civil war.
* Students will know that refugees seek many challenges when leaving their home country and arriving in a host country.
* Students will know that the Italian island of Lampedusa is heavily inundated with migrants crossing from Tunisia, due to its close proximity [70 miles].
* Asylum seeker: someone whose request for sanctuary has yet to be processed.
 | Asylum Seeker | * Students will know what a Refugee is, and that these people are leaving to escape war, persecution, or natural disaster.
 |
| **L6: How will climate change affect migration?** | * Students will know that long term climatic changes are causes threats to coastal communities/countries such as Bangladesh.
* Climate refugee: a person who has been forced to leave their home as a result of the effects of climate change on their environment.
* Students will know that Bangladesh is predicted to have 13.3 million climate refugees by 2050.
* Students will know that Bangladesh is a multi-hazardous location suffering from cyclones, flooding & landslides.
* Students will know that low lying land along much of Bangladesh’s coastline means people are migrating due to coastal flooding.
 | Climate refugee | * Students will know that climate change can have localised as well as global implications.
* Students will know that climate change refers to long term changes in global weather patterns.
* Students will know that melting ice sheets are contributing to rising sea levels.
 |
| **L7: Issue Evaluation: Should people be able to freely migrate across all countries?**  | * Students will know how to construct a balanced argument using knowledge gained throughout the previous lessons.
* Students will know that migration can be seen differently depending on the viewpoint e.g. the host or source country.
* Students will know that migration is a lifeline for many people and is not done by choice, whereas for others it is for financial gain.
 | Construct | * Students will know migration can be caused by an array of factors including climate, economy, conflict.
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| **Unit: The Middle East**  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* |
| **L1: What and where is the ‘Middle East’?**  | * The ‘Middle East’ is a construct, coined by the British.
* The Middle East is located primarily in western Asia, but also in parts of northern Africa and south-eastern Europe. It is defined as a region.
* The Burj Khalifa and Temenos Gate are examples of human features.
* The Euphrates River and Mt Damavand are examples of physical features.
 | Region  | * Latitude refers to the angular distance north or south of the equator.
* Earth’s landmass is divided into seven continents.
* Physical features refer to naturally occurring phenomena.
 |
| **L2: What are the climate characteristics of the Middle East?**  | * The Middle East has three main climate zones : Arid, Semi-Arid and Mediterranean.
* Arid is the driest climate, where evaporation occurs faster than precipitation.
* The Mediterranean climate can be found in Turkey, Semi-Arid in Syria and Arid in Saudi Arabia.
* On a climate graph, arid regions will have the lowest total precipitation and Mediterranean the highest.
 | Arid | * Arid refers to (of land or a climate) having little or no rain; too dry or barren to support vegetation.
* A climate graph uses a line graph to show temperature, and bar chart to show precipitation.
 |
| **L3: How has physical geography impacted population distribution in the Middle East?** | * Areas of high population density are cities such as Tehran and Cairo, while low density areas include the Lut Desert,
* The Arid climate zones of the ME can create low population density, as it is difficult to grow crops or access water.
* Areas of high relief, such as the Zagros mountains, will have low population density as it is difficult to build infrastructure.
 | Population Distribution  | * Relief refers to the height and shape of the land.
* Temperature reduced with altitude.
* Population distribution refers to how the population is spread out over a geographic area.
* Population density refers to the number of people living in an area per sq mile.
 |
| **L4: How will climate change impact the Middle East?**  | * Climate change will lead to hotter heatwaves, higher sea levels and more severe droughts.
* By 2100, “wet-bulb temperatures”—a measure of humidity and heat—could rise so high in the Gulf as to make it all but uninhabitable
* Swelling populations and food demands, combined with even scarcer water and land resources, could lead to a doubling of food prices.
* The prolonged dry spell in Syria has led to the death of 85 percent of livestock in the east and widespread crop failure, pushing 800,000 people into food insecurity and triggering mass migration
 | DroughtMigration  | * Students will know that drought is a prolonged period of abnormally low rainfall
* Students will know that drought is expected to impact large areas of the Horn of Africa, in particular Somalia, Kenya and Ethiopia.
 |
| **L5: What makes oil so valuable?**  | * Oil underpin modern society, mainly supplying energy to power industry, heat homes and provide fuel for vehicles and aeroplanes to carry goods and people all over the world.
* The price of oil has gradually increased since 1950, providing economic benefit to countries mining it.
* Oil can stimulate the economy of a country, by employing local people, and this enabling the government to raise taxes for infrastructure spend.
 | Economic   | * Oil is a valuable resource
* Oil has been the source of geopolitical tension in the Arctic
* A prime reason for Trump wanting to buy Greenland was for the natural resources of the area
 |
| **L6: To what extent has oil exploration benefitted the U.A.E?**  | * After the discovery of oil, Dubai was able to invest in key infrastructure, which accelerated its development.
* Diversification: is a technique that reduces risk by allocating investments across various financial instruments, industries, and other categories.
* Free trade zone: geographic area where goods may be imported, stored, handled, manufactured, or reconfigured and re-exported under specific customs regulation and generally not subject to customs duty.
* Dubai is now attempting to diversify their income through tourism and technology hubs such as ‘Internet City’.
* Oil kickstarted the U.A.E’s development, but in the future they will become less dependent on the resource.
 | Diversification Free Trade Zone  | * Dubai is a city within the U.A.E
* The U.A.E is located in the Middle East
* Oil can stimulate the economy of a country, by employing local people, and this enabling the government to raise taxes for infrastructure spend.
 |
| **L7: Have all countries followed the path of Dubai?** | * Yemen, at the southern end of the Arabian Peninsula, sits on proved hydrocarbon reserves of some 3 billion barrels of crude oil.
* Yemen has been involved in a brutal civil war which has resulted in a humanitarian crisis.
* Humanitarian Crisis: a singular event or a series of events that are threatening in terms of health, safety or well-being of a community or large group of people.
* Without a significant refinery presence, the country is reliant on refined product imports from the UAE, Saudi Arabia, Russia and Iraq for its gasoline and diesel needs.
* The war in Yemen has deterred foreign investors from extracting oil in the country, reducing the benefit of the natural resource.
 | Civil War Foreign Natural Resource | * After the discovery of oil, Dubai was able to invest in key infrastructure, which accelerated its development.
* Oil can stimulate the economy of a country, by employing local people, and this enabling the government to raise taxes for infrastructure spend.
* War - a state of armed conflict between different countries or different groups within a country.
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| **Unit: Earth’s dwindling resources and our race for more**  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* |
| **Are resources evenly distributed?**  | * Water security: the reliable availability of an acceptable quantity and quality of water for health, livelihoods and production, coupled with an acceptable level of water-related risks
* Energy consumption is increasing as the world becomes more developed and demand increases.
* HIC’s such as the USA, UK and Australia consumer more energy per person. The people living in these countries are usually linked to a national electricity grid. They use a lot of technology in their lives and have a high standard of living.
* Areas suffering from poor water security include Norther Africa, the Middle East and Western USA.
* Physical causes include arid regions, such as deserts, causing water insecurity.
* Economic reasons for water insecurity include poor water infrastructure e.g. pipes or sanitation facilities. This means there may be enough water, but it cannot be used.
 | Water Security  | * Arid climates may have lower water and food availability, as would the desert biome.
* Oil is ‘geographically rare’.
* LIC’s may have less access to resources due to lower financial capacity.
 |
| **Will we ever run out of resources? Which theory do you believe?**  | * Population increase will cause significant problems for resource consumption in the future.
* Malthusian theory argues that resources increase at a steady rate, and will be overtaken by population. This is the ‘point of crisis’ whereby the population is higher than available resources.
* Evidence for this theory include famine, war and undernutrition.
* Boserup argues that humans will use technology to rapidly increase resources, meaning the point of crisis is not hit.
* Evidence for this includes fertilisers and GM crops.
 | Theory  | * Population refers to the number of inhabitants in a certain place or area.
* Resources are unevenly distributed.
 |
| **Has war in Ukraine impacted food insecurity?**  | * Ukraine is a major exporter of wheat, corn and sunflower oil. The conflict is preventing farmers from sowing as usual.
* Russia is a major fertiliser exporter – sanctions are resulting in global demand not being met, and lower crop yields.
* War in the ‘breadbasket of Europe’ is having a big impact on food security across the continent and the wider world.
* Scarcity of food has led to rising prices within the conflict zone and elsewhere in the world.
* This effect is graver in developing regions, where a larger part of people’s disposal income is spent on food. For example, Nigeria.
 | Exporter   | * Russia-Ukraine conflict is linked with the physical geographies of the region.
* Conflict is a serious disagreement between two or more parties.
* Food insecurity - the disruption of food intake or eating patterns because of lack of money and other resource.
 |
| **The impacts of food insecurity. Is Malthus right after all?** | * **Undernutrition:** when people do not eat enough calories or get enough nutrients to cover their needs for energy and growth, or to maintain a healthy immune system.
* Children who are undernourished are often born smaller, while constant hunger weakens the immune system, leaving them more vulnerable to disease and infection.
* Famine can lead to severe undernutrition, and eventually death.
* Soil erosion is leading to farmers being able to grow smaller amounts.
* Globally, food prices have increased, thus increasing food insecurity.
* Food insecurity can lead to social unrest, such as in Burkina Faso 2012.
 | Undernutrition | * Food insecurity - the disruption of food intake or eating patterns because of lack of money and other resource.
* Famine has occurred in Yemen as a result of food insecurity and conflict.
* Civil unrest is an example of conflict.
* Erosion is the process by which materials are worn away.
 |
| **Radical solutions: 3D Printed Food** | * Redefine Meat has commercially launched the world's first whole cut plant-based 3D printed steak in Europe.
* 3D printers can be used to ‘mimic’ meat structures using plant extracts.
* This would have dramatically less impacts on the planet, reducing the need to rear livestock and thus reducing climate change.
* It could also provide food to areas which are struggling with drought, if every mass produced.
 | 3D printed food | * **Undernutrition:** when people do not eat enough calories or get enough nutrients to cover their needs for energy and growth, or to maintain a healthy immune system.
* Children who are undernourished are often born smaller, while constant hunger weakens the immune system, leaving them more vulnerable to disease and infection.
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| **Unit: Earth’s dwindling resources and our race for more**  |
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| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* |
| **Why will UK energy mix change?** | * Energy mix - The range of energy sources of a region or country, both renewable and non-renewable.
* The UK has drastically reduced the amount of coal used.
* A decade ago about 40% of the country's electricity came from coal, now it is close to 0%.
* This significantly alters the UK’s energy mix, increasing the future importance of renewable energies.
* Now the UK has the biggest offshore wind industry in the world, as well as the largest single wind farm. It is also investing heavily in solar and hydroelectric power.
* The benefits of this changing energy mix are a more positive outlook on climate change, and an improved energy security for the UK in the future.
 | Energy Mix  | * Energy mix - The range of energy sources of a region or country, both renewable and non-renewable.
* It is predicted that the UK will see a large increase in the % of renewables used to generate our electricity.
* Energy security: Enough energy to meet demand.
 |
| **Why is Western Europe energy insecure?**  | * Western Europe refers to the region of Western Europe includes the regions of northern Europe, southern Europe, Central Europe, and the British Isles.
* Western Europe is currently energy insecure due to reliance on Russian Gas.
* Tensions have risen due to the recent conflict in Ukraine, resulting in potential disruptions to energy in the near future.
* As a result of the conflict, Western Europe is looking to ‘diversify’ its energy mix to end its reliance on Russia.
 | Energy InsecureReliance | * Some areas of the world are in energy insecurity, such as the North America. This is because they consume more than they use.
* Energy mix - The range of energy sources of a region or country, both renewable and non-renewable.
* The Middle East is located primarily in western Asia, but also in parts of northern Africa and south-eastern Europe. It is defined as a region.
* Students will know that two of Russia’s chief preoccupations—its vulnerability on land and its lack of access to warm-water ports—came together in Ukraine in 2014.
* Students will know that the 2022 crisis is born of physical factors, along with the ideological conflict with NATO.
 |
| **Is fracking a good option for improving the UK’s energy security?**  | * To reduce reliance on foreign countries, the UK wants to introduce something called fracking.
* Fracking – The process of injecting liquid at high pressure into subterranean rocks, boreholes, etc. so as to force open existing fissures and extract oil or gas.
* Fracking uses huge amounts of water, which must be transported to the fracking site, at significant environmental cost.
* The government believes shale gas has the potential to provide the UK with greater energy security, growth and jobs.
* Fracking can trigger minor earthquakes that can cause damage to local infrastructure.
 | Fracking | * Western Europe is currently energy insecure due to reliance on Russian Gas.
* As a result of the conflict, Western Europe is looking to ‘diversify’ its energy mix to end its reliance on Russia.
* Energy security: Enough energy to meet demand.
* An earthquake is the rapid shaking of ground, which has the potential to damage people and property.
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| **Unit: Issue Evaluation: UK Challenges** |
| **Lesson/Learning Sequence**  | **Intended Knowledge:***Students will know that…* | **Tiered Vocabulary**  | **Prior Knowledge:***In order to know this students, need to already know that…* |
| **Is Glastonbury festival sustainable?** **Location and History of the festival**  | * Glastonbury Festival is a five-day festival of contemporary performing arts held near Pilton, Somerset, England.
* Glastonbury is attended by around 200,000 people, requiring extensive security, transport, water, and electricity-supply infrastructure.
* These natural resources could have a significant impact on the planet.
* The festival can have significant influences on the local environment and population.
 | InfrastructureSustainable | * Sustainability is the practice of using natural resources responsibly today, so they are available for future generations tomorrow.
* The world’s resource are finite, and could run out.
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| **Is Glastonbury festival sustainable?****How does Glastonbury aim to be sustainable?** | * Glastonbury festival promotes the ‘worthy pledge’. Examples that festival goers have to sign include: I will respect the fields and the people in them. I will dispose of rubbish carefully using the correct bins. I will take all my belongings / camping gear home with me again.
* Festival attendees do not always follow this pledge.
* Recycling: In 2014, Glastonbury Festival recycled 54 per cent of the waste produced on site. However, in 2018, 50 per cent was reused or recycled, and 132 tonnes of food waste was turned into compost.
* Just a short walk from the Pyramid Stage, the recycling centre deals with a city-sized amount of waste over five days at the end of June almost annually.
* Transport: Festival and coach package tickets are offered at a reasonable price, and free shuttle buses run regularly between Worthy Farm and the nearest train station. Currently, around 40 per cent of Glastonbury festivalgoers arrive via public transport.
 | Recycling Centre | • Glastonbury Festival is a five-day festival of contemporary performing arts held near Pilton, Somerset, England. • Glastonbury is attended by around 200,000 people, requiring extensive security, transport, water, and electricity-supply infrastructure.• These natural resources could have a significant impact on the planet. • The festival can have significant influences on the local environment and population. |
|  **Is Glastonbury festival sustainable?****What are the environmental impacts?** | * The 2022 festival produced a carbon footprint of -596.25 tonnes of CO2e.
* The biggest UK music festival, which attracts more than 200,000 attendees and creates 2,000 tonnes of rubbish each year, actually has a net positive impact on the climate.
* Glastonbury festival offsets it’s C02 via planting trees on site, recycling and using renewable energy.
* The 2019 festival instituted a ban on the sale of plastic, which is set to be in place for the foreseeable future.
* The new policy was a success, with the on-site recycling team telling BBC News that there was “a massive reduction in the amount of plastic on the site this year”, adding that the total amount was “the least ever seen, by a distance.”
 | Carbon Footprint | * Students will know that carbon footprint refers to the amount of C02 that is released from the action of individuals, organisations and communities.
* Students will know that carbon footprints are influenced by choices of travel, food, consumer items and domestic habits.
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| **Is Glastonbury festival sustainable?****What are the economic gains of the festival?** | * Glastonbury generates over £100 million into the economy of South West England each time it takes place and music festivals as a whole employ over 85,000 people directly.
* This can create positive multiplier effects, which result in improved health and education in the local area.
 | Positive Multiplier Effect | * Glastonbury is attended by around 200,000 people, requiring extensive security, transport, water, and electricity-supply infrastructure.
* The term economic refers to jobs and income (money)
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| **What are the impacts of sports-led regeneration in Liverpool?** **Regeneration background in Liverpool** | * The Bramley Moore dock is the site of proposed regeneration.
* This part of Liverpool has been in decay for decades
* The very fine docks and surrounding warehouses are largely unused and closed to the public.
* Everton football club are in the process of building a new stadium at the site.
* The stadium is just over one year into an expected three-year build, and is set to open in the 2024/25 season.
 | Regeneration  | * Regeneration is the long-term upgrading of existing urban, rural, industrial and commercial areas to bring about social and economic change.
* Regeneration occurred in Hulme, Manchester.
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| **What are the impacts of sports-led regeneration in Liverpool?** **The Bramley Moore Dock Stadium: Benefits** | * It is not just a football ground; it is a once-in-a-generation project that will act as a catalyst for more than £650m worth of accelerated regeneration.
* Everton’s new stadium will be the start or end point for a river-walk, connecting the south of the city to the north, as well creating new major public spaces for events on non-matchdays.
* It will become a vital part of the city’s tourism offer.
* Estimates are that Everton Stadium - which is being built to become the most sustainable stadium in the country - along with any associated development in North Liverpool, will generate a £1.3bn boost to the economy, create tens of thousands of jobs and attract 1.4m visitors to the city annually.
 | SustainableTourism | * The Bramley Moore dock is the site of proposed regeneration.
* This part of Liverpool has been in decay for decades
* The very fine docks and surrounding warehouses are largely unused and closed to the public.
* Everton football club are in the process of building a new stadium at the site.
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| **What are the impacts of sports-led regeneration in Liverpool?** **The Bramley Moore Dock Stadium: Issues** | * The building could damage marine ecosystems at the site.
* The stadium could be at risk of climate change/sea level rise in the future.
* The Surging Seas website, which maps out scientific predictions of sea level rise, shows that 2℃ climate change would inundate the Liverpool docklands in the next 200 years or so.
 | Sea Level Rise | * Ice caps are melting in the Arctic, leading to sea level rise.
* The impacts of climate change are global.
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