**Year 10 Geography**

|  | **Topic** | **Key concept – what do I want the students to learn from this unit?** | **What knowledge will they acquire?** |
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| **YEAR 10 OVERVIEW** | | | |
| **Y10 - half term 1** | Forests under threat | Why are taiga forests so important, how are they being damaged and what is being done to protect them? | 8.2a. How biotic and abiotic characteristics are interdependent  how taiga  plants and animals  (migratory) are adapted to the climate.  8.2b. Why the taiga has lower productivity, with less active nutrient  cycling and much lower levels of biodiversity. (1)  8.4a. Direct threats from logging for softwood, pulp and paper  production and indirect threats  8.4b. How acid precipitation, forest fires, pests and diseases and  forest fires contribute to a loss of biodiversity. (2)  8.6a. Challenges of creating and maintaining protected wilderness  areas, national parks and sustainable forestry in the taiga.  8.6b. Reasons for conflicting views on protecting or exploiting forest  and natural resources in the taiga. |
| **Y10 – half term 2** | Energy | How can the growing demand for energy be met without serious environmental consequences? | 9.1a/b. How energy resources can be classified as non-renewable  (finite stocks of fossil fuel coal, oil and gas), renewable (flows  of solar, wind, HEP) and recyclable (nuclear, biofuels).How mining and drilling can have environmental impacts  (landscape scarring, oil spills, carbon emissions, removal of  forests) and the landscape impacts of renewable energy (HEP  flooding, land use for wind turbines and solar panels).  9.2a. How access to energy resources is affected by access to  technology and physical resources (geology, accessibility,  climate and landscape influences on renewable potential).  9.2b. The global pattern of energy use per capita and the causes of  variations (levels of economic development, reliance of  traditional fuel sources, demand from different economic  sectors).  9.3a. How oil reserves and production are unevenly distributed and  why oil consumption is growing (rising per capita GDP, rapid  industrialisation in emerging economies).  9.3b. How oil supply and oil prices are affected by changing  international relations (conflicts, diplomatic relations) and  economic factors (periods of recession versus boom, over or  under supply).  9.4a. Economic benefits and costs of developing new conventional oil  and gas sources in ecologically-sensitive and isolated areas.  9.4b. Environmental costs (negative impacts on water quality and  ecosystems) of developing new unconventional oil and gas  sources (tar sands, shale gas) in ecologically-sensitive and  isolated areas.  9.5a. The role of energy efficiency and energy conservation (in  transport and the home) in reducing demand, helping finite  energy supplies last longer and reducing carbon emissions.  9.5b. Costs and benefits of alternatives to fossil fuels (biofuels, wind,  solar and HEP) and future technologies (hydrogen) aimed at  reducing carbon footprints, improving energy security and  diversifying the energy mix.  9.6a. How different groups (consumers, TNCs, governments, climate  scientists and environmental groups) have contrasting views  about energy futures (business as usual versus sustainable).  9.6b. How, in some developed countries, rising affluence,  environmental concerns and education are changing attitudes  to unsustainable energy consumption and reducing carbon  footprints. |