



'I CAN DO' sheets

Southchurch High School

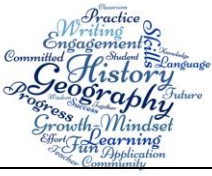


Rate your confidence in the following topic content and geographical skills by ticking the appropriate column beside each point:

- Red = Not confident
- Yellow = Almost there
- Green = Confident

Changing landscapes of the UK			
I can describe the characteristics of the UK's main rock types: sedimentary, igneous and metamorphic.			
I can describe the distribution of the UK's main rock types: sedimentary, igneous and metamorphic.			
I can describe and explain the role of geology and past tectonic processes in the development of upland and lowland landscapes.			
I can describe and explain how distinctive upland and lowland landscapes result from the interaction of physical processes (glacial erosion and deposition, weathering and climatological, post-glacial river and slope processes).			
I can describe and explain how distinctive landscapes result from human activity (agriculture, forestry, settlement) over time.			
Geographical skills			
I can use geological maps to describe the distribution of the UK's main rock types.			
I can use simple geological cross-sections to show the relationship between geology and relief.			
I can locate key physical features (uplands, lowland basins, rivers) on outline UK maps.			
I can recognise physical and human features on 1:25,000 and 1:50,000 OS maps.			

Topic content: Coastal landscapes and processes			
I can describe and explain the physical processes at work on the coast: weathering (mechanical, chemical, biological), mass movement (sliding and slumping), erosion (abrasion, hydraulic action, attrition and solution), transport (traction, saltation, suspension, solution and longshore drift) and deposition.			
I can describe and explain the influence of geological structure (concordant/discordant, joints and faults), rock type (hard/soft rock) and wave action (destructive and constructive waves) on landforms.			
I can suggest how the UK's weather and climate (seasonality, storm frequency and prevailing winds) affect rates of coastal erosion and retreat, and impact on landforms and landscape.			

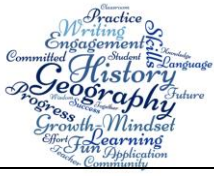


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I can describe and explain the role of erosional processes in the development of landforms: headlands and bays, caves, arches, cliffs, stacks, wave cut platforms.			
I can describe and explain the role of depositional processes in the development of landforms: bars, beaches and spits.			
I can suggest how human activities (urbanisation, agriculture and industry) have affected landscapes.			
I can describe and explain the interaction of deposition and erosion processes in the development of landforms.			
I can describe and explain the effects of coastal recession and flooding on people and the environment.			
I can describe advantages and disadvantages of different coastal defences used on the coastline of the UK: hard engineering (sea walls, groynes and rip rap) and soft engineering (beach nourishment and sand dune regeneration).			
I can explain how different defences used on the coastline of the UK can lead to change in coastal landscapes.			
I can suggest the significance of the location of one named distinctive coastal landscape (discordant, concordant, coastline of deposition, coastal retreat).			
I can explain how one named distinctive coastal landscape has been formed.			
I can examine the physical and human factors most influential in its change.			
Geographical skills			
I can use BGS Geology maps (paper or online) to link coastal forms to geology.			
I can use UK weather and climate data.			
I can calculate mean rates of erosion using a multi-year data set.			
I can recognise coastal landforms on 1:25,000 and 1:50,000 OS maps.			
I can use 1:25,000 and 1:50,000 OS maps, and GIS, to investigate the impact of human intervention.			

Topic content: River processes and landscapes			
I can describe and explain the physical processes at work in the river landscape: weathering, mass movement, erosion, transport and deposition.			
I can describe how river landscapes contrast between the upper courses, mid courses and lower courses of rivers.			
I can explain why channel, valley profile, gradient, discharge, velocity and sediment size and shape change along the course of a named UK river.			
I can explain how the UK's weather and climate affect river processes and impact on landforms and landscapes.			
I can describe and explain the role of erosion processes and the influence of geology in the development of landforms: interlocking spurs, waterfalls, gorges and river cliff.			
I can describe and explain the role of depositional processes in the formation of flood plains, levees and point bar.			
I can describe and explain the interaction of deposition and erosion processes in the development of landforms.			

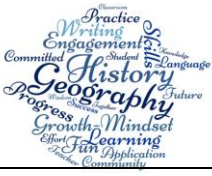


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I can suggest how human activities and changes in land use have affected river processes that impact on river landscapes.			
I can describe and explain the physical and human causes and effects of river flooding.			
I can describe and explain advantages and disadvantages of different defences used on UK rivers and how they can lead to change in river landscapes.			
I can suggest the significance of the location of one named distinctive river landscape.			
I can explain how one named distinctive river landscape has been formed and the most influential factors in its change.			
Geographical skills			
I can use BGS Geology maps (paper or online) to link river long profiles to geology.			
I can use UK weather and climate data.			
I can recognise river landforms on 1:25,000 and 1:50,000 OS maps.			
I can draw simple storm hydrographs using rainfall and discharge data.			
I can use 1:25,000 and 1:50,000 OS maps, and GIS, to investigate the impact of human intervention.			

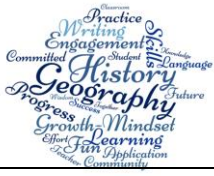
Topic content: Weather hazards and climate change			
I can describe and explain features of the global atmospheric circulation.			
I can describe and explain how circulation cells and oceans currents transfer and redistribute heat energy across the Earth.			
I can describe and explain how climate has changed over different time scales – glacial and interglacial periods during the Quaternary period.			
I can explain the natural causes (Milankovitch cycles, solar variation and volcanism) of climate change and provide evidence (ice cores, pollen records, tree rings and historical sources) to support these changes.			
I can describe and explain how human activities (industry, transport, energy, farming) produce greenhouse gases (carbon dioxide, methane) that cause the enhanced greenhouse effect.			
I can describe and explain negative effects that climate change is having on the environment and people.			
I can describe and explain the climate of the UK today and how it has changed over the last 1000 years.			
I can describe and explain special variations in temperature, prevailing winds and rainfall within the UK.			
I can explain the significance of the UK's geographic location in relation to its climate.			
I can explain how the global circulation of the atmosphere leads to tropical cyclones in source areas and the sequence of their formation			
I can describe the characteristics, frequency and geographical distribution of tropical cyclones and how they change over time.			



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I can describe and explain the reasons why tropical cyclones are natural weather hazards.			
I can describe and explain the different social, economic and environmental impacts that tropical cyclones can have on a named developed and a named emerging or developing country.			
I can describe and explain the different responses to tropical cyclones of individuals, organisations and governments in a named developed and a named emerging or developing country.			
I can outline the characteristics of arid environments compared with the extreme weather conditions associated with drought.			
I can describe and explain the different causes of the weather hazard of drought: meteorological, hydrological and human.			
I can describe and explain why the global circulation makes some locations more vulnerable to droughts than others and how this can change over time.			
I can describe and explain reasons why droughts are hazardous.			
I can describe and explain how the impact of drought on people and ecosystems can vary for a named developed country and an emerging or developing country.			
I can describe and explain the different responses to droughts from individuals, organisations and governments in a named developed and an emerging or developing country.			
Geographical skills			
Use and interpret line graphs/bar charts showing climate change.			
Use a GIS to track the movement of tropical cyclones.			
Use of weather and storm surge data to calculate Saffir–Simpson magnitude.			
Use of social media sources, satellite images and socio-economic data to assess impact.			
Use and interpretation of graphs showing medium-term rainfall trends.			
Use and interpretation of socio-economic data.			

Topic content: Ecosystems, biodiversity and management			
I can describe distributions and characteristics of the world's large-scale ecosystems.			
I can explain the role of climate and local factors in influencing the distribution of different large-scale ecosystems.			
I can explain how the biosphere provides resources for people but is also increasingly exploited commercially for energy, water and mineral resources.			
I can describe distribution and characteristics of the UK's main terrestrial ecosystems.			
I can recognise the importance of marine ecosystems to the UK as a resource and how human activities are degrading them.			
I can describe the biotic and abiotic characteristics of the tropical rainforest ecosystem.			
I can explain the interdependence of biotic and abiotic characteristics for tropical rainforests.			

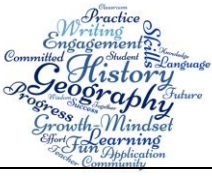


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I can explain why rainforests have high biodiversity and how plants and animals are adapted to this environment.			
I can suggest examples of goods and services provided by tropical rainforest ecosystems.			
I can explain how climate change presents a threat to the structure, functioning and biodiversity of tropical rainforests.			
I can explain the economic and social causes of deforestation.			
I can explain the political and economic factors that have contributed to the sustainable management of a rainforest in a named region.			
I can describe the abiotic and biotic characteristics of the deciduous woodland ecosystem.			
I can explain the interdependence of biotic and abiotic characteristics for deciduous woodlands.			
I can suggest examples of goods and services provided by deciduous woodland ecosystems.			
I can explain how climate change presents a threat to the structure, function and biodiversity of the deciduous woodland ecosystem.			
I can explain the different approaches to the sustainable use and management of deciduous woodlands in a named region.			
Geographical skills			
I can use world maps to show the location of global biomes.			
I can compare climate graphs for different biomes.			
I can interpret GIS maps.			
I can use and interpret nutrient cycle diagrams and food web diagrams.			
I can use and interpret lie graphs showing the range of future global population projections and population in relation to likely available resources.			
I can use GIS to identify the pattern of forest loss.			

Topic content: Changing cities			
I can describe trends in urbanisation over the last 50 years in different parts of the world and describe and explain how and why urbanisation has occurred at different times and rates in different parts of the world.			
I can describe the distribution of UK population and the location of major urban centres.			
I can explain regional differences in the rate and degree of urbanisation in the UK.			
I can describe the importance of Birmingham’s connectivity in regional and global contexts and describe the structure of the city in terms of its functions and building age.			
I can describe and explain the processes of urbanisation, suburbanisation, counter-urbanisation and re-urbanisation in the context of Birmingham.			
I can explain how migration has affected different parts of Birmingham and identify Birmingham’s key population characteristics.			
I can explain the link between economic change and inequality in Birmingham.			
I can describe and explain the recent changes in retailing in Birmingham and the impact of these changes.			

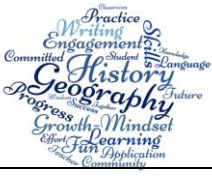


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I can describe strategies for making urban living more sustainable and improving the quality of life in Birmingham, and explain the challenges of making urban living more sustainable in Birmingham.			
I can describe the site and context of Mexico City and the importance of its connectivity in regional and global contexts, and describe the structure of the city in terms of its functions and building age.			
I can explain reasons for past and present trends in population growth in Mexico City and identify causes of national and international migration to Mexico City and how it impacts different part of the city.			
I can describe the link between Mexico City’s growth and inequality and explain why there are wealthy and poor areas and the reasons for the inequality.			
I can describe the results of Mexico City’s rapid urbanisation and the impact on people and the environment.			
I can describe the characteristics of bottom-up and top-down strategies and the advantages and disadvantages of these approaches, and evaluate how well government policies improve the quality of life within Mexico City.			
Geographical skills			
I can use and interpret line graphs and calculate rate of change/annual or decadal percentage growth.			
I can use satellite images to identify different land use zones in urban areas.			
I can use population pyramids, choropleth maps and GIS.			
I can use Census output area data for 2011.			
I can calculate the ecological footprint of people in the city, and compare it to other locations.			
I can use GIS/satellite images, historic images and maps to investigate spatial growth.			
I can use quantitative and qualitative information to judge the scale of variations in quality of life.			

Topic content: Global development			
I can describe contrasting ways of defining development, using economic criteria and broader social and political measures.			
I can describe and explain different factors that contribute to the human development of a country.			
I can describe and explain how development is measured in different ways.			
I can describe the global pattern of development and its unevenness between and within countries, including the UK.			
I can suggest factors that have led to spatial variations in the level of development globally and within the UK.			
I can explain the impact of uneven development on the quality of life in different parts of the world.			
I can explain the range of international strategies that attempt to reduce uneven development.			
I can describe the difference between top-down and bottom-up development projects and explain their advantages and disadvantages in the promotion of uneven development.			
Case study of development in a developing or an emerging country			

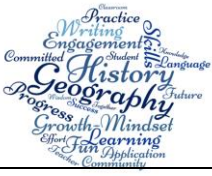


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I can describe the location and position of the chosen country in its region and globally.			
I can describe the broad political, social, cultural and environmental context of the chosen country in its region and globally.			
I can describe unevenness of development within the chosen country and explain the reasons why development does not take place at the same rate across all regions.			
I can describe positive and negative impacts of changes that have occurred in the sectors of the chosen country's economy.			
I can describe the characteristics of international trade and aid, and the chosen country's involvement in both.			
I can describe the changing balance between public investment and private investment for the chosen country.			
I can describe the changes in population structure and life expectancy that have occurred in the last 30 years in the chosen country.			
I can describe the changing social factors for the chosen country.			
I can explain how geopolitical relationships with other countries affect the chosen country's development.			
I can explain how technology and connectivity support development in different parts of the chosen country and for different groups of people.			
I can explain the positive and negative social, economic and environmental impacts of rapid development for the chosen country and its people.			
I can explain how the chosen country's government and people are managing the impacts of its rapid development to improve quality of life and its global status.			
Geographical skills			
I can compare the relative ranking of countries using single versus composite (indices) development measures.			
I can interpret choropleth maps.			
I can use numerical economic data to profile the chosen country.			
I can use proportional flow line maps to visualise trade patterns and flows.			
I can interpret population pyramids.			
I can use socio-economic data to calculate difference from the mean, for core and periphery regions.			

Topic content: Water resource management			
I can describe how the supply of fresh water varies in different countries around the world.			
I can explain the differences in water consumption between developing, emergent and developed countries and the reasons for these differences.			
I can give reasons why the UK has water supply problems.			
I can explain why emerging or developing countries have water supply problems.			

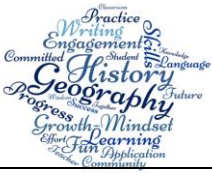


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I can suggest how technology can help tackle water shortages (desalination).			
I can explain why there are disputes about how water is exploited and who gets to consume it.			
I can suggest why water resources require sustainable management.			
I can explain about different ways in which water resources are managed sustainably, and views about this.			
A case study on how one developed country and one developing or emerging country have attempted to manage their water resources in a sustainable way.			
Geographical skills			
I can interpret UK and world maps showing the distribution of freshwater resources supply and demand.			
I can interpret line graphs showing the range of future global population projections, and population in relation to likely available water resources.			
I can interpret UK and world relative water stress maps.			

Topic content: Energy resource management			
I can describe the differences between renewable and non-renewable energy resources.			
I can explain the advantages and disadvantages of the production and development of renewable and non-renewable energy resources.			
I can describe the composition of the UK energy mix.			
I can explain how the global energy mix varies due to a number of factors.			
I can explain how and why the global energy demand and supply has changed over the past 100 years.			
I can explain how non-renewable and renewable energy resources are being developed and their impact on people and the environment.			
I can suggest how technology can help resolve energy resource shortages.			
I can understand and explain the different attitudes to the exploitation and consumption of energy resources.			
I can suggest why renewable and non-renewable resources require sustainable management.			



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I can offer and explain different views on management and sustainable use of energy resources.			
I know a case study on how one developed country and one merging country has attempted to manage their energy resources in a sustainable way.			
Geographical skills			
I can interpret world maps showing the distribution of energy resources.			
I can interpret line graphs showing the range of future global population projections, and population in relation to likely available energy resources.			
I can calculate carbon and ecological footprints.			