**Physical Geography Checklist**

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| Topic & information | I don’t know this | I need to spend more time on this | I know this!! |
| **Coasts** |  |  |  |
| Explain the processes of weathering – mechanical and weathering |  |  |  |
| Describe what mass movement is, how it works and the different types (slides, slumps, rockfalls) |  |  |  |
| Explain how the different types of erosion work – hydraulic power, abrasion & attrition |  |  |  |
| Describe the features of different waves – constructive and destructive |  |  |  |
| For each of the landforms below can you recognise it form a photograph, describe its characteristics and explain its formation:  Cliffs  Wave-cut platforms  Headlands and bays  Caves, arches, stump, stacks |  |  |  |
| Explain how the sea transports material – traction, saltation, suspension, solution |  |  |  |
| Draw a diagram to show how longshore drift works and explain how it works |  |  |  |
| Define deposition and explain how it occurs |  |  |  |
| For each of the landforms below can you recognise it form a photograph, describe its characteristics and explain its formation:  Beaches  Spits  Bars  Sand dunes |  |  |  |
| Make sure you can identify the following from maps:  Caves, arches, stacks, stumps  Cliff and wave-cut platforms  Beaches  Spits |  |  |  |
| For an example you have studied – this is one coastline like on the Dorset coast make sure you can make the landforms |  |  |  |
| Define hard and soft engineering |  |  |  |
| For each sea defence (see the table on page 44) make sure you can say what it is and explain the benefits and costs |  |  |  |
| Explain what managed retreat is |  |  |  |
| For an example you have studied – this is one coastline like on the Holderness coast make sure you say why the coastline is retreating, how they protect it and why there was still some conflict |  |  |  |
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| **Rivers** |  |  |  |
| Define a river’s long and cross profile and describe how it changes over its course |  |  |  |
| Describe and explain how the shape of the river channel and valley changes downstream |  |  |  |
| Explain the differences between vertical and lateral erosion |  |  |  |
| Describe the processes of erosion – hydraulic action, abrasion, attrition, solution |  |  |  |
| Describe the processes of transportation – traction, saltation, suspension, solution |  |  |  |
| Explain why deposition happens |  |  |  |
| Describe and explain the formation of the landforms of erosion:   * Waterfalls & gorges * Interlocking spurs |  |  |  |
| Describe and explain the formation of the landforms of both erosion and deposition:   * Meanders * Ox-bow lakes |  |  |  |
| Draw all of the landforms and draw a cross-section of a meander |  |  |  |
| Describe and explain the formation of the landforms of deposition:   * Flood plains * Levees * Estuaries |  |  |  |
| Identify river landforms on a map – this must include the upper, middle and lower course |  |  |  |
| Define river discharge |  |  |  |
| Explain how a flood hydrograph works |  |  |  |
| Explain the human and physical factors affecting discharge and the causes of flooding |  |  |  |
| Evaluate the benefits & disadvantages of different flood defences |  |  |  |
| Assess the impacts of the flood defence scheme at Yarm |  |  |  |

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| **Ecosystems** |  |  |  |
| Describe the features of a small scale ecosystem – this could be a pond or a hedgerow |  |  |  |
| Recognise some basic characteristics of different ecosystems |  |  |  |
| Recognise the basic features of tropical rainforests |  |  |  |
| Explain how the each part of the rainforest is interdependent on each other |  |  |  |
| Describe the features of the vegetation and animals and explain how they are adapted to their physical environment |  |  |  |
| Using a case study (Amazon) - Describe the causes of deforestation |  |  |  |
| Using a case study (Amazon) - Explain the impacts of deforestation |  |  |  |
| Explain the different approaches to sustainable management - at both local and international scales |  |  |  |

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| **Natural and tectonic hazards** |  |  |  |
| Define natural hazard |  |  |  |
| Describe the two main types of natural hazard |  |  |  |
| Explain what can affect the hazard risk from natural hazards |  |  |  |
| Describe the structure of the Earth |  |  |  |
| For each of the plate margins you can draw labelled diagrams, name any landforms that form there and explain how they work   * Destructive * Constructive * Conservative |  |  |  |
| Describe and explain the distribution of earthquakes and volcanoes |  |  |  |
| Describe the primary and secondary effects that earthquakes cause |  |  |  |
| Describe the immediate and long-term responses to earthquakes |  |  |  |
| Explain how the effects and responses differ between rich and poor countries |  |  |  |
| Describe why lots of people live in areas at risk from tectonic hazards |  |  |  |
| Explain how management can reduce the effects of tectonic hazards |  |  |  |

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| **Weather hazards** |  |  |  |
| Explain how air circulates between high and low pressure belts as surface winds |  |  |  |
| Explain the conditions needed for a tropical storm to develop |  |  |  |
| Explain the formation of tropical storms |  |  |  |
| Label the structure of a tropical storm |  |  |  |
| Describe how climate change may affect tropical storms |  |  |  |
| Describe the primary and secondary effects of a tropical storm |  |  |  |
| Describe the immediate and long-term responses to a tropical storm |  |  |  |
| Explain how we can manage tropical storms |  |  |  |
| Describe the different weather the UK gets |  |  |  |
| Explain how the weather is getting more extreme |  |  |  |

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| **Climate change** |  |  |  |
| Describe how the Earth is getting warmer |  |  |  |
| Describe the evidence for climate change |  |  |  |
| Explain the natural and human factors which could cause climate change |  |  |  |
| Assess how climate change affects people and the environment |  |  |  |
| Describe a range of mitigation factors that aim to reduce the causes of climate change |  |  |  |
| Explain how we can adapt to climate change |  |  |  |

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| **Cold environments - Alaska** |  |  |  |
| The physical characteristics of a cold environment – the climate, temperatures, landscapes |  |  |  |
| How the climate, permafrost, soils, plants, animals and people are interconnected |  |  |  |
| How plants and animals adapt to the physical conditions. |  |  |  |
| Alaska has low biodiversity and what this means |  |  |  |
| The development opportunities in Alaska: mineral extraction, energy, fishing and tourism |  |  |  |
| The challenges of developing Alaska: extreme temperature, inaccessibility, provision of buildings and infrastructure. |  |  |  |
| The value of cold environments as wilderness areas and why these fragile environments should be protected. |  |  |  |
| Strategies used to balance the needs of economic development and conservation in Alaska – use of technology, role of governments, international agreements and conservation groups. |  |  |  |