KESTEVEN AND SLEAFORD HIGH SCHOOL

Geography Scheme of Learning

Year 7 – Term 6/Unit 6 – Rocks, weathering and coastal landscapes

Intent – Rationale

This unit provides an introduction to physical landscapes and how they change over time. Students develop their prior knowledge of types of rocks, their characteristics and how they change through the rock cycle over millions of years. Weathering processes are introduced and the factors that affect rates of weathering. Students learn about the importance of soil for the world's increasing population. In the coasts topic students learn about the causes of waves and tides and the erosional processes that change the coastal landscape. This topic provides opportunity for local fieldwork; students visit Skegness in Lincolnshire where they carry out fieldwork on the beach and develop understanding of coastal processes and management. Finally, we teach about the challenges of plastic pollution and propose and evaluate solutions to the problem.

Sequencing – what prior learning does this topic build upon?	**Sequencing – what subsequent learning does this topic feed into?**
• Rock grouping and physical properties of rocks (KS2) • Knowledge that soil is made from rocks and organic matter (KS2) • Fossil evidence (KS2) • Rotation of the earth around the sun (KS2)	• UK Physical Landscapes (GCSE Y10 AQA) • Coastal landscapes in the UK (GCSE Y10 AQA) • Coasts (Y12 Edexcel A level) – role of lithology in affecting coastal recession, coastal processes including marine and sub-aerial processes and coastal management
What are the links with other subjects in the curriculum?	**What are the links to SMSC, British Values and Careers?**
• Science – rocks/rock cycle/soil/nutrients • Art – plastic pollution	• SMSC • SP2, • M2 • Careers: i) Creativity, g) teamwork, a) communication
What are the opportunities for developing literacy skills and developing learner confidence and enjoyment in reading?	**What are the opportunities for developing mathematical skills?**
FROM THE LIBRARY *Coast and Coastal Management*; Michael Hill-910 *Cracking Coasts*; Anita Ganeri-910 *Introduction to Coastal Geomorphology*; A Pethick-551 *Soil; Malissa Stewart*-552.5	• Drawing a soil profile (lesson 3) • Drawing a divided bar chart (lesson 3)

Landforms; Brain Knapp-551 *Environmental Hazards;* Keith Smith-363.7 *Global Pollution*; Franklin Watts-360 *National Geographic*- magazine collection.	

GEOGRAPHY Scheme of Learning
Year 7 – Term 6

Intent – Concepts

What knowledge will students gain and what skills will they develop as a consequence of this topic?
Know The characteristics of igneous, sedimentary and metamorphic rocks The processes of physical, chemical and biological weathering The structure of soil profiles The characteristics of waves and tides The processes of coastal erosion The process of longshore drift The causes of plastic pollution **Apply** Knowledge of the rock cycle to explain how rocks change over time How weathering processes can change landscapes Knowledge of soil characteristics to the importance of food provision for the world's population Knowledge of how tides vary according to the position of the moon Knowledge of how tides change during the day due to the position of the moon Knowledge of coastal erosion and longshore drift to explain the formation of coastal landforms

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Knowledge of ocean currents to explain the location of ocean gyres

Extend:

Understanding of the factors that affect rates of weathering
Knowledge of how tides vary during the month according to the position of the moon and the sun
Ability to evaluate options for reducing the problems of plastic pollution

What subject specific language will be used and developed in this topic?	What opportunities are available for assessing the progress of students?
• igneous • sedimentary • metamorphic • rock cycle • lava • magma • freeze-thaw • exfoliation • nutrient • humus • bedrock • fertilizer • coast • erosion • deposition • transportation • groyne • rock armour • fetch • longshore drift	• Key word knowledge and spelling test • Factual knowledge test – end of topic • Homework – one 20 minute task per week

• prevailing wind • tourism • facilities • erosion • hydraulic action • attrition • abrasion • solution • deposition • transportation • wave-cut platform	

Intent – Concepts

Lesson title	Learning challenge	Higher level challenge	Suggested activities and resources
1. What are the rock groups and how do they connect in the rock cycle?	To know the characteristics and differences between igneous, sedimentary and metamorphic rocks	To explain the rock cycle and how rocks are changed over time	Powerpoint 1. Geog. 3 4th edition pages 8-9, pages 12-13
2. What are the weathering processes?	To know the processes of physical, chemical and biological weathering	To be able to explain that factors that affect the rate of weathering processes	Powerpoint 2. Geog. 3. 4th edition pages 10-11

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3. What is soil and why is it important?	To describe a soil profile by referring to soil horizons	To explain the importance of soil in providing food for the world's growing population	Powerpoint 3. Geog. 3 4th edition. Pages 20-21
4. What are waves and how are they formed?	To explain how waves form	To explain the role of waves in eroding and depositing beach sediment	Powerpoint 4. Geog 2. 4th edition. Pages 50-51
5. How do waves shape the coastline?	To describe processes of erosion; hydraulic action, abrasion, solution, attrition	To be able to explain the processes of erosion	Powerpoint 5. Geog. 2 4th Edition. Pages 52-53
6. What landforms do waves create along a coastline?	To recognise landforms on a coastline	To explain the formation of wave-cut platforms, headlands, bays, arches, caves, stacks and stumps	Powerpoint 6. Geog. 2 4th Edition. Pages 54-55
7. How is material transported along a coastline?	To be able to describe the process of longshore drift	To be able to explain why longshore occurs and identify and explain the landforms formed by this process	Powerpoint 7. Geog. 1 4th Edition. Pages 55
8. Is plastic pollution our oceans' biggest challenge?	To know the causes of plastic pollution in the ocean and the main contributors to the problem	To evaluate solutions to the problems of plastic pollution in the ocean	Powerpoint 8.