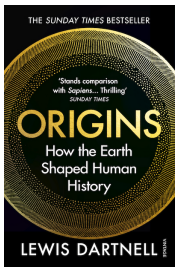

Curriculum Links

ORIGINS: How the Earth Shaped Human History explores how different features of the planet we live on have deeply influenced the human story, from our very origins as a species, through the millennia of the rise and fall of diverse civilisations and empires, and are clearly discernible even today in current affairs and modern politics. The material in this book delves deep into the links between physical geography and human geography, and thus ties-in very closely to the curricula at KS3, KS4 and A-level. **ORIGINS** examines the core ideas of places, processes and environments, and how they interact with each other across a broad range of both spatial scales from local to global and temporal scales (from human decisions to geological ages). Relevant right up to A-level, the book also tackles more specialised concepts such as causality, complex systems, feedback and equilibrium, and globalisation. The book is intrinsically interdisciplinary, studying the interplay between Geography and Earth Sciences with History and Current Affairs, and so not only are specific examples explained in detail, but also the connections between different themes and concepts to offer a more holistic understanding of the whole subject.

This document provides an over-view of the concepts and processes in both human and physical geography contained within **ORIGINS**, all referenced to the relevant page numbers (UK paperback edition: Vintage, 2020). Hopefully this will serve as a useful directory for teachers wanting to look-up explanatory material and case-study content relating to specific topics on the curricula. This directory relates to material within the book itself, but self-contained teacher resource packs are also planned for release. If you have any ideas for teachers' resources to develop please get in contact: lewis@lewisdartnell.com

Many of these topics are supported by high-resolution, full-colour graphics and maps that are also available for download at www.teachers.orginsbook.com

Excerpt from ORIGINS

"Each of us is literally made of the Earth, as is all life on the planet. The water in your body once flowed down the Nile, fell as monsoon rain onto India, and swirled around the Pacific. The carbon in the organic molecules of your cells was mined from the atmosphere by the plants that we eat. The salt in your sweat and tears, the calcium of your bones, and the iron in your blood all eroded out of the rocks of Earth's crust; and the sulphur of the protein molecules in your hair and muscles was spewed out by volcanoes. The Earth has also provided us with the raw materials we've extracted, refined and assembled into our tools and technologies, from the roughly fashioned hand axes of the early Stone Age to today's computers and smartphones. It was our planet's active geological forces that drove our evolution in East Africa as a uniquely intelligent, communicative and resourceful kind of ape, while a fluctuating planetary climate enabled us to migrate around the world to become the most widely spread animal species on Earth. Other grand-scale planetary processes and events created the different landscapes and climate regions that have directed the emergence and development of civilisations throughout history.

Recently, we have become greatly concerned about humanity's impact on the natural environment, and rightly so. But we are still inextricably linked to our planet, and the Earth's history is imprinted in our make-up, just as much as our activities have left their distinct marks on the natural world. To truly understand our own story we must examine the biography of the Earth itself – its landscape features and underlying fabric, atmospheric circulation and climate regions, plate tectonics and ancient episodes of climate change. I want to explore what our environment has done to us." *[p.1–3]*

Tectonic Processes and Hazards

Excerpt from ORIGINS

"Our planet is a restlessly active place, constantly changing its face. Fast-forwarding through deep time you'd see the continents gliding between myriad different configurations, frequently colliding and welding together only to be ripped apart again, with vast oceans opening and then shrinking and disappearing. Great chains of volcanoes pop and fizzle, the ground shivers with earthquakes, and towering mountain ranges crumple out of the ground before being ground away back to dust. The engine powering all this fervent activity is plate tectonics." *[p.8]*

Climate Change and Ice Ages

Excerpt from ORIGINS

"As the world warmed again after the last glacial maximum and sea levels rose, the Bering land bridge once again disappeared beneath the waves. The connection between Alaska and Siberia was severed, and the Eastern and Western hemispheres were cut off from each other. Lasting contact would not be made again between the peoples of the Old World and the New for another 16,000 years, until Columbus set foot on the Caribbean islands in 1492. Genetically similar, but living in different landscapes with access to different plants and animals, these two isolated populations of humanity set out on independent paths to developing agriculture and civilisation." *[p.52]*

Landscapes

Geological timescales

Geology and rocks

Long-term effects of geography on human history

Agriculture

Origins of agriculture	p. 60-70
Why did we chose the crops that we domesticated?	p.67-70, 78-82
Taming wild animals, and the ramifications for civililisation	p.74-78, 82-87

Early civilisations

Early river civilisations: Mesopotamia, Indus, China, Egypt	p.70-74, 90-91
Why early civilisations emerged along tectonic plate boundaries:	p.25-29
How Mesopotamia, the cradle of civilisation, is a tectonic landscape:	p.70-74
Tectonic environment of Mediterranean & classical civilisations:	p.98-106
Roman Empire and Han China	p.183-187, 206-208

Coasts, maritime activities and trade

Fishing, Doggerbank	p.94-98
Maritime trade across Indian Ocean	p.106-115
The Spice Islands	p.111-115, 244-246
Geography of the Seas: importance of straits and chokepoints	p.115-121
Oil tanker routes and geopolitical security	p.120-121
Atmospheric circulation, prevailing winds, and the Age of Sail	p.217-254
Explorers: Vasco da Gama, Christopher Columbus	p.227-231, 238-241
Monsoon winds	p.238-244

Excerpt from ORIGINS

"For millennia, the vast swathe of the steppes represented a great churning cauldron of pastoral nomads, repeatedly brimming over its lip to spill into the domains of the settled, agricultural civilisations around the continental margin. This conflict between the two was an enduring dynamic of Eurasian history, and is ultimately born of an ecological distinction between dry grasslands and fertile agricultural lands – the worlds of the steppe and the sown – and the different human lifestyles they support. And so the Great Wall of China, built as defensive fortifications against roving 'barbarians', in fact followed the line of a fundamental ecological boundary." *[p.204]*

Atmospheric circulation and climate bands

Climate bands: (polar, tundra, taiga, temperate, tropical)	p.195-196
Atmospheric circulation creates climate bands	p.232-236
Climate bands: the steppes across Eurasia	p.196-216
effects of environment on lifestyle	p.197-205

Atmospheric circulation, prevailing winds, and the Age of Sail	p.217-254
Explorers: Vasco da Gama, Christopher Columbus	p.227-231, 238-241
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Ocean currents	p.237-238
Ancient ocean circulation patterns and formation of oil	p.277-279

Water cycle and water security

Early river civilisations: Mesopotamia, Indus, China, Egypt	p.70-74, 90-91
Tibetan plateau as the water tower of Asia	p.91-93

Carbon cycle and Fossil Energy

Industrial Revolution	p.255-260
Coal - how was it produced and where is it found today?	p.261-273
Oil - how was it produced and where it is found today?	p.273
Global warming, how to decarbonise economy, green technologies	p.279-281
Human-caused climate change, the Anthropocene	p.287

Excerpt from ORIGINS

"The entire history of civilisation is just a flash in the current interglacial period – a transient spell of climatic stability. During these past few millennia we've dug up Earth's stony subterranean layers and piled them above ground to construct our buildings and monuments. We've excavated rich ores where metals have been concentrated by particular geological processes. And in the last few centuries we've mined the coal formed during a quirky period of the planet's past when ancient forests refused to rot, and we've sucked up the oil created by plankton settling to the asphyxiated seafloor of a drowned world.

We've now turned over a third of the Earth's total land area to agriculture. Our mining and quarrying moves more material than all the world's rivers combined. And our industrial exhalations release more carbon dioxide than volcanoes, warming the climate of the entire planet. We have profoundly altered the world, but we only recently acquired such overwhelming dominion over Nature. The Earth set the stage for the human story and its landscapes and resources continue to direct human civilisation. The Earth made us." *[p.287]*

Distribution of Resources

Iron – what created deposits of iron ore and where are they found?	p.164-174
Modern metals: Platinum Group Metals and Rare Earth Elements:	p.174-182
Different rock types: igneous, metamorphic, sedimentary	p.128-155

Globalisation

Global Geopolitics and Superpowers

About the book

ORIGINS explores how different features of planet Earth – from plate tectonics and climate bands, to atmospheric circulation and the distribution of resources – have defined the human story. The book tours from our very origin as a species, through the millennia of history and the rise and fall of diverse civilisations and empires, and shows how underlying planetary features are clearly discernible even today in current affairs and modern politics

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ORIGINS was a Sunday Times bestseller, a The Times 'Ten books that change how you see the world' and a Waterstones 'Best of 2019' book.