Hampshire County Council
Improvement and Advisory Service

HIAS MOODLE OPEN RESOURCE

History

Teaching climate change and sustainable futures through the history curriculum

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Final version

Overview

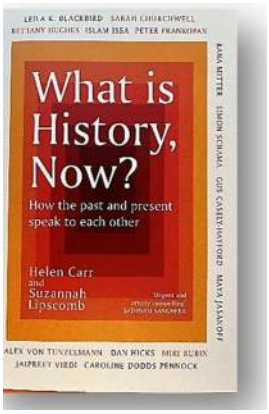
This document contains…
guidance to support building climate and environmental education into the history curriculum towards building a sustainable future.

Points to consider when using this resource

This document was created during January 2025 and all website links were active at this time. The organisations signposted are mainly national ones that teachers are likely to be familiar with such as UCL and the Historical Association, but it is always recommended to quality assure any online sources you use in the classroom with your colleagues.

Why teach climate and sustainable futures through the disciplinary lens of history?

What is history today? Why are historians currently writing about the climate and the environment?



What Is History, Now?: Amazon.co.uk: Lipscomb, Suzannah, Carr, Helen: 9781474622455: Books

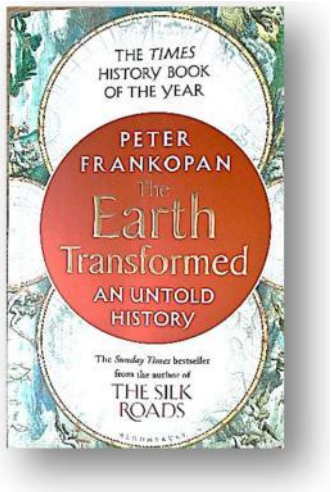
The recent edition of the book that seeks to answer its title question, *What is history now? (2021)* gives us an insight into why many historians are choosing to write about the history of the climate and humanities relationship with the environment. The historian, Simon Schama has the last word in his final chapter, aptly entitled, *History naturally.* He explains,

"The most important issue of our times, pandemics notwithstanding, the fate of our habitable planet; the long story of the interaction between humanity and nature can hardly help but be a spur to historical thinking."

His work challenges the assumption that the natural and human history are separate or at odds with one another. His view on why historians are writing narratives of environmental history inescapably entangled with human action, ***"Every year brings chastening confirmation that nature shapes history quite as much as vice versa."***

The first words of the book go to groundbreaking historian, Peter Frankopan, known for his sweeping reassessment of global histories. In his chapter, *Why global history matters* he argues, ***"in a globalised and interlinked world that we live in today, it is more important than ever to be thinking more inclusively about history." "Few things connect us all, disease is one, climate is another"*** Frankopan reflected in conversation with historian William Dalrymple at the Literary Festival in 2024). Frankopan puts the climate and environment front and central in his new history book, *The Earth transformed, an untold history* (2024). He gives three reasons for his choice of subject *"at this moment of global crisis"* listed here in his words:

1. *to reinsert climate back into the story of the past as an underlying, crucial and much **overlooked theme in global history** and to show where, when and how... climate has had an important impact on the world.*
2. *The second is to set out the story **of human interaction with the natural world** over millennia and to look at how our species **exploited, moulded and bent the environment to its will**, both for good and for ill.*
3. *to **expand the horizons of how we look at history**. Study of the past has been **dominated by the attention paid to the global north',** that is the wealthy societies of Europe and North America, with the history of other continents and other regions often relegated to secondary significance or ignored entirely. That same pattern applies to climate science and research into climate history.*



The Earth Transformed: An Untold History: Amazon.co.uk: Frankopan, Professor Peter: 9781526622556: Books

Why teach climate and sustainability through history?

The Historical Association 2024 forum was on the changing climate: making history relevant, reflecting the increasing importance teachers and schools are placing on teaching students about the ecological climate crisis and its historical roots. The keynote delivered by Alison Kitson argued convincingly that history should be playing a leading role in the education of the climate crisis. It is after all, she explained, **'a societal problem', 'a human problem',** even more than a science problem**.** Technological based solutions will be 'developed and deployed based on human values.' History does indeed teach us that is human choices to act based on their values around exploiting the land and its resources that have led to the climate emergency declared in 2018. However, it is also the case that some past cultures understood how to live sustainably with nature and people have worked together to overcome environmental problems in the past, giving us hope for better future outcomes. It is human ingenuity that is developing the science and technologies needed to address the issues we face. Historian Alice Bell points to the discovery of electricity as a possible answer to the energy crisis and remains optimistic in her book, *Our biggest experiment: an epic history of the climate crisis* (2021), ***"Our ancestors have left us an almighty mess, but they also left us tools for survival. We have the knowledge and technology to make a positive change."***

So, what can pupils gain from studying the history of climate and sustainability from a historical perspective?

- History education can deepen pupils' understanding of the historical roots of the ecological climate crisis fostering a sense of responsibility and helping pupils make an informed contribution to tackling the crisis.
- Understanding tipping points in climate change challenges the idea of inevitability in history, suggesting a need for human agency avoiding unproductive fatalism.
- History helps students reflect on human interactions with the natural world over time, including where climate has had agency in shaping outcomes.
- Global histories teach the interconnectedness of humanity and our dependence on nature revealing the importance of a global response to the climate crisis.
- A chronological focus reveals the impact of humans in impacting and accelerating climate change has been a relatively short time in human history, therefore suggesting the potential for adaption and recovery in a relatively short time.
- A history of human ingenuity and environmental recovery brings hope for the future.
- Taking an interdisciplinary approach in the curriculum teaches the importance of an interdisciplinary approach to tackling the climate crisis.
- Studying this topic provides a rich context to develop knowledge of disciplinary concepts (causes and consequences of climate changes such as tipping points; historical significance attributed to climate in past/present narratives, provoking discussion; changes and continuities in climate and its changing impact on societies, power structures, trade or disease; chronology across human history at macro/micro scale).
- Studying the disciplinary methods of enquiry will introduce students to a wide range of sources available to historians due to improved technologies, leading to a reassessment of traditional narratives.
- Studying historical perspectives can inform sustainable future practices for example studying the impact of exploitative attitudes in contrast to past cultures with sustainable practices based on indigenous knowledge of the environment.

Potential teaching approaches

Teaching the big story: going macro

It is helpful to provide pupils with a framework to enable them to make sense of large patterns in history according to Rick Rogers (2016) in Counsell, Brun and Chapman's *Master class in history education.* To help pupils see the big story of climate change I have based these five possible episodes when important changes occurred based on Peter Langdon's four thresholds in climate history in his 2024 Teaching History(194) article, *When the humans take over the world?* I have added a possible fifth phase around the optimistic question of whether potentially we are in what will later become known as a Green Revolution by historians with contemporary efforts for sustainability including the move away from fossil fuels. Pupils can explore and debate whether the 21st Century can really be considered as a period of green revolution or green shoots.

The rise of Homo sapiens	The human species goes global	The Industrial Revolution	The Great Acceleration	A Green Revolution or green shoots?
				
200, 000 -5000 years ago	800 – 250 years ago	250-100 years ago	70 years ago to today	The present

A thematic approach: what is the history of energy through time?

Alison Kitson and Nebiat Michael's excellent article, *Industrialisation, energy and the climate crisis* (2024) in the Historical Association's publication *Teaching history* (194) recommends framing the road to the current climate crisis as result of humanities 'energy binge' from more renewable sources throughout history to the more recent shift to fossil fuels (coal/steam, oil and electricity happening relatively quickly and the great acceleration of consumption as population growth exploded. Particularly powerful is the exploration of the idea within the enquiry that 'nothing inevitable about the shift to coal to power factories in the 1800s in Britain. Water was a pretty good source of power', challenging pupils' sense of inevitability. Pupil outcomes are a road map towards the climate crisis, an excellent way to represent change written previously about by Rachel Foster and recommended in the article, *Climate change: greening the curriculum?* (2016) Teaching History article By K. Hawkey, J James and C. Tidmarsh. Read these articles to find out more and see examples of the road maps. The article and *Teaching History* (194), *Climate and environment* offer further teaching approaches.

Micro histories – example case studies

As well as understanding the larger narrative of human impact on the environment and climate crisis it is important to include enquiries that delve into the stories of particular places and times. These provide meaning and memorable contexts that help pupils grasp the tangible impacts of the climate crisis by making abstract concepts more relatable and understandable. These stories can illustrate how environmental changes caused by human actions affect communities, ecosystems, and daily life, fostering empathy and a deeper connection to the issue. Here are two examples. You will find more in the recommended resources section of this document.

What stories would the nutmeg tell?

Historical events, such as the Dutch conquest of the Banda Islands for nutmeg, illustrate the violent exploitation of resources and the impact on local populations. Kate Hawkey outlines events in her book, *History and the climate crisis (2023)* explains how, *"decentring humans and narrating accounts from a neutral other can be a powerful approach to take, particularly when addressing sensitive and controversial histories"* *History and the Climate Crisis: Environmental History in the Classroom (Knowledge and the Curriculum): Amazon.co.uk: Hawkey, Kate: 9781800082748: Books*.

How did the Sioux relate to the natural world on the Great Plains?

The Sioux deeply respected and lived in harmony with the natural world on the Great Plains, relying on buffalo for food, clothing, and shelter, and using every part of the animal to avoid waste. They practised sustainable hunting and gathering, taking only what they needed and ensuring the land remained fertile and productive. Sioux history teaches pupils the importance of respecting natural resources, minimising waste, and living sustainably to ensure the health of our planet for future generations, helping pupils feel empowered to contribute to solutions.

The expansion of white settlers led to the displacement of Indigenous people, who had sustainable practices that preserved the land. The influx of settlers brought intensive farming techniques that overworked the soil and removed native grasses, which contributed to severe soil erosion. Combined with prolonged drought, these practices resulted in the devastating Dust Bowl of the 1930s. Teaching the impact of exploitation of natural resources can help pupils better appreciate the urgency of climate action.

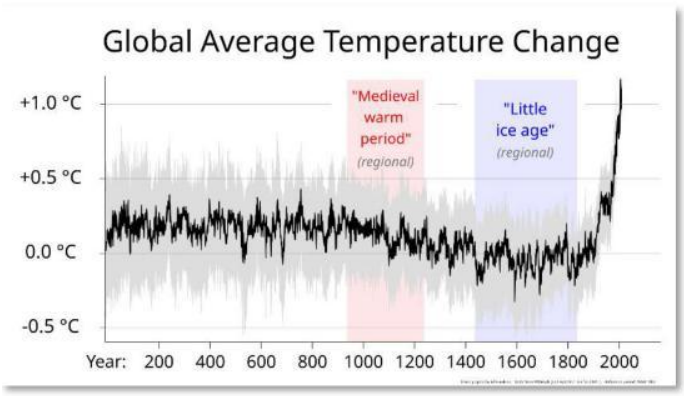
Example enquiry questions

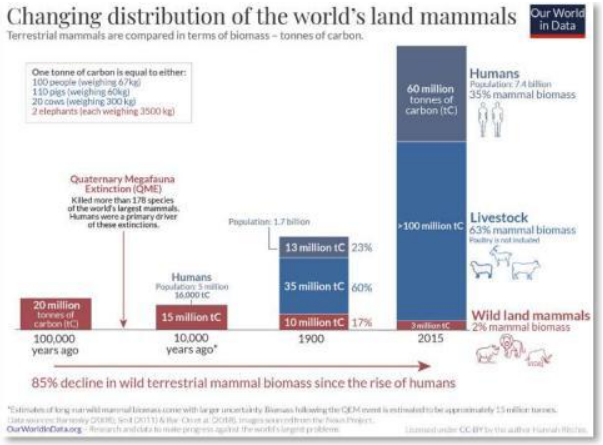
Driving your history curriculum using enquiry questions in history education helps to foster a knowledge-rich approach and guide students through complex historical narratives. They provide a substantive and disciplinary lens through which to build knowledge systematically to answer a central question by the end of a sequence of lessons. Here are some examples for teaching the history of climate change and sustainable futures.

- How have humans changed our world?
- When did humans leave the biggest footprint on earth?
- How did climate change history?
- Did climate matter in history?
- Is human and natural history connected?
- When did humans take over the world?
- Did climate help or hinder the Romans?
- How did the warm period effect medieval history?
- What was the impact of the Little Ice Age?
- Was the Columbian Exchange historically significant?
- Why do people argue about the Anthropocene?
- How did the Industrial Revolution change the world?
- How did the Sioux relate to the natural world on the Great Plains?
- What story would the river X/ tell?
- What story of the climate would a microbe tell?
- What would an oak tree in our ancient woodland tell?
- What can we learn about a sustainable future from the indigenous people of Australia?
- How should people remember James Watt?
- Why should people remember Rachel Carson?
- What can nutmeg reveal about the story of climate change?
- How related is the history of climate and disease?
- How can history help us create a sustainable future?
- Is the 21st Century really a Green Revolution?

Key events to consider in the history of the climate crisis:

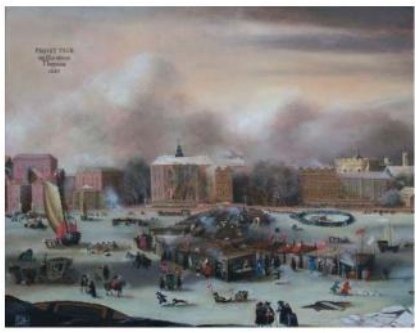
The graph on global average temperatures shows the Medieval Warm Period and Little Ice Age were not global phenomena. The recent exponential climb in temperature is stark.





"While we often think of ecological damage as a modern problem our impacts date back millennia to the times in which humans lived as hunter-gatherers. Our history with wild animals has been a zero-sum game: either we hunted them to extinction, or we destroyed their habitats with agricultural land." – Hannah Ritchie for *Our World in Data* *(quoted here https://en.wikipedia.org/wiki/Anthropocene).*

Year 7: Foundations of human civilisation and early environmental impacts to an early globalised economy



- **Historical perspectives on human-animal relationships** reveal a long-standing pattern of exploitation and changing attitudes towards non-human species.
- **Emergence of farming (c. 8500 BCE)**: Marked human control over nature, leading to increased land use and environmental changes.
- **Neolithic Revolution (c. 10,000 BCE)**: Transition from foraging to farming, leading to increased land use and deforestation.
- **The Holocene Period (c. 11,700 years ago – present)**: Stable climate conditions allowed human civilisation to thrive.

- **The medieval warm period** helped to lead to the growth in the bacterium and rodent populations that led to outbreaks of plague like the Black Death.
- **The Little Ice Age (1640s-1690s)** was characterized by extreme cold, affecting agriculture and contributing to social unrest, with significant historical consequences.
- **The Columbian Exchange (15th - 16th Centuries)**: introduction of diseases like smallpox to the Americas, decimating indigenous populations and altering land use and ecosystems.
- **The First Globalized Economy (early 16th Century)**: began with European colonization, leading to widespread environmental changes and resource exploitation.
- **The General Crisis (17th Century)** involved widespread instability, war, and climate change, impacting societies globally, including the English Civil War. Historians like Hobsbawm and Parker debated the causes of the crisis, with Parker emphasising climate's role without falling into determinism.
- **The English Diggers' Movement (1649)**: attempt to create a communal agricultural society, highlighting early ideas of sustainable land use and social equity.
- **John Evelyn's Book (1664)**: Early call for sustainable forestry practices in response to deforestation and resource depletion in Europe.
- **Hans Carl von Carlowitz's Treatise (1713)**: advocated for sustainable forestry practices, emphasising the need for resource management to prevent environmental degradation.

Year 8: Industrialisation and its environmental consequences

The Anthropocene is the term used to simply describe the time during which humans have had a substantial impact on our planet. The start date is debated, with proposed start dates ranging from 8,000 years ago with agriculture, the 1750s with the Industrial Revolution, to the mid-twentieth Century's Great Acceleration from around the 1950s.

- **Industrial Revolution (c. 1760-1840)**: James Watt's improvements to the steam engine (1769) led to increased use of fossil fuels.
- **Decision to use Fossil Fuels (late 18th Century)**: the shift from waterpower to fossil fuels, significantly increased carbon emissions. This decision was not inevitable, water was in plentiful supply and its power illustrated by Arkwright water mills. It was a human decision based on factors such as how to make the greatest profit building factories in urban centres which required less provisions for workers falling to the factory owner.
- **Thomas Malthus's Theory (1798)**: predicted that population growth would outpace food production, leading to famine and environmental stress.
- **Colonial Expansion (18th-19th Centuries)**: environmental damage and famines caused by exploitative policies and resource extraction in colonies and impact on indigenous

populations (Indigenous peoples, who represent 300 to 600 million individuals, inhabit a quarter of the world's land and maintain 80% of global biodiversity).

- **Impact of Colonialism on Indigenous Peoples in America (15th-17th Centuries)**: Environmental and cultural impacts, including deforestation and disruption of traditional land management practices.
- **Impact of Colonialism on Indigenous Peoples in Australia (1788-19th Century)**: environmental and cultural impacts, including habitat destruction and introduction of invasive species.
- **Enlightenment thought and Darwin's Theory of Evolution (1859)**: challenged the notion of human exceptionalism, emphasizing humanity's integral role in nature.
- **The First Industrial Revolution (late 18th Century)**: led to increased carbon emissions and significant environmental changes.

Year 9: The Great Acceleration and modern environmental challenges and responses

- **The Spanish Flu Pandemic (1918 - 1920)**: climate changes impacted the outbreak of Spanish Flu which Infected one-third of the global population, resulting in 50-100 million deaths.
- **The Dust Bowl (1930s)**: soil erosion and drought in the USA caused by unsustainable farming practices.
- **Soviet Union's Forced Collectivization (1930s)**: famine causing 6-8 million deaths due to forced agricultural policies and environmental mismanagement.
- **The Great Acceleration (Post-WWII, 1950s - present)**: rapid increase in population and GDP, coinciding with rising global temperatures and carbon emissions.
- **1960s marked the rise of the environmental movement**, with NASA's Earth images influencing public perception and environmental attitudes. **1960s technological advances** satellite measures earth's temperature, greenhouses gases, ozone layer and sea ice thickness. Ice cap melting predicted. **1972 The "Blue Marble" image** became iconic, symbolising global unity and environmental awareness, despite mixed interpretations of its impact.
- **1985 Ozone Layer hole discovered and scientific success.** Montreal Protocol in 1987 banning CFCs was one of the most successful global environmental policies of the 20th Century, and helped raise public awareness of climate change. **Deeper Ice drilling begins.** Ice cores extracted from Antarctica confirm that CO2 and temperature have gone up and down together over the past 150,000 years.
- **Advent of wind and solar technologies (1950s - present)**: development and implementation of renewable energy sources.
- **Aral sea shrinkage (2007)**: reduced to 10% of its size due to unsustainable water management practices.
- **Modern environmental movements (20th - 21st centuries)** Britain at the forefront of contemporary efforts for sustainability in a new green revolution: 2021 scientists predict temperature rise to 1.5C by 2040 is now inevitable resulting in more heatwaves, intense storms, droughts and floods. However, it's not too late to prevent further warming of 2°C beyond a tipping point; through drastically reducing carbon emissions in the next decade.

Resources to support you:

History and the Climate Crisis, Environmental history in the classroom by Kate Hawkey (UCL Press 2023)

This book is free to download and is an **invaluable starting point** for teachers offering practical classroom strategies to teach the Climate Crisis and important knowledge of environmental and climate history in overview and in depth through particular stories. It provides It places the reasons for teaching historical events through an environmental lens within historical debate and how this will develop pupils' disciplinary knowledge.

UCL training modules on *Teaching for sustainable futures*: **highly recommended** as free research-informed, free professional development to help teachers embed climate change and sustainability into their teaching.

- **Teaching for Sustainable Futures – Primary History**
- **Teaching for Sustainable Futures – Secondary History**

Historical Association resources

Recorded webinar: Teaching history during a climate emergency: how can we respond? / Historical Association (2021) **A highly recommended watch** for history teachers starting out on climate education through the history curriculum. Alison Kitson shares her research with UCL and builds on the recommendations of the work of Kate Hawkey to explain and exemplifying the approaches and enquiries she recommends in teaching the history of the climate emergency.

Climate change: greening the curriculum? Teaching History article By Kate Hawkey, Jon James and Celia Tidmarsh, published 18 April 2016

Teaching History 194: *Climate and Environment* The HA's journal for secondary history teachers

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Graph on global average temperatures RCraig09 - Own work, CC BY-SA 4.0, https://commons.wikimedia.org/w/index.php?curid=87832845.

Changing distribution of the world's land mammals in tonnes of carbon by Hannah Ritchie, Our World in Data - https://ourworldindata.org/mammals, CC BY 4.0, https://commons.wikimedia.org/w/index.php?curid=120802173.

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Roman wine making by unknown master - book scan, Public Domain, https://commons.wikimedia.org/w/index.php?curid=1638834.

Burying Plague victims during the Black Death. By Pierart dou Tielt (fl. 1340-1360) - http://balat.kikirpa.be/photo.php?path=X004175&objnr=20049662 , Public Domain, https://commons.wikimedia.org/w/index.php?curid=64384803.

The Frost Fair, Little Ice Age by Rita Greer – The original is an oil painting on board by Rita Greer, history painter, 2009. This was digitised by Rita and sent via email to the Department of Engineering Science, Oxford University, where it was subsequently uploaded to Wikimedia., FAL, https://commons.wikimedia.org/w/index.php?curid=7667271.

Watermill By Jean-Pol GRANDMONT - travail personnel (own work), CC BY 2.0, https://commons.wikimedia.org/w/index.php?curid=191210

Coalbrookdale by night By Philip James de Loutherbourg, Public Domain, https://commons.wikimedia.org/w/index.php?curid=154184

The Anthropocene is characterised by human impacts on their environment, with ramifications for variables such as climate change, biodiversity loss, and global food insecurity. By Petersen-Rockney M, Baur P, Guzman A, Bender SF, Calo A, Castillo F, De Master K, Dumont A, Esquivel K, Kremen C, LaChance J, Mooshammer M, Ory J, Price MJ, Socolar Y, Stanley P, Iles A and Bowles T (2021) Narrow and Brittle or Broad and Nimble? Comparing Adaptive Capacity in Simplifying and Diversifying Farming Systems. Front. Sustain. Food Syst. 5:564900. doi: 10.3389/fsufs.2021.564900, CC BY 4.0, https://commons.wikimedia.org/w/index.php?curid=151551610

Dust storm approaching Stratford, Texas. Dust Bowl surveying in Texas by Credit: NOAA George E. Marsh Album - Source: original upload 7 March 2005 in english wikipedia by w:en:User:Brian0918; there from http://www.photolib.noaa.gov/htmls/theb1365.htmSource: original upload 7 March 2005 in english wikipedia by w:en:User:Brian0918; there from welding training, Public Domain, https://commons.wikimedia.org/w/index.php?curid=84974568

Castle Romeo nuclear test (yield 11 Mt) on Bikini Atoll. It was the first nuclear test conducted on a barge. The barge was located in the Castle Bravo crater. By United States Department of Energy - This image is available from the National Nuclear Security Administration Nevada Site Office Photo Library under number XX-33.This tag does not indicate the copyright status of the attached work. A normal copyright tag is still required., Public Domain, https://commons.wikimedia.org/w/index.php?curid=443729

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