Learning across the curriculum in HSIE − sustainability

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## About this resource

The NSW Department of Education’s Quality Teaching Discussion Paper outlines a model of syllabus planning and implementation that supports teachers on the basis of ‘central concepts or ideas’ to ensure deep knowledge in student learning. This is especially relevant for the learning across the curriculum content areas.

Whilst the Learning Across the Curriculum content Cross-Curriculum Priority - Sustainability is somewhat embedded in syllabus content through the process of tagging, teachers have requested guidance to identify:

* a continuum of conceptual development in each of the cross-curriculum priorities
* examples of what this looks like in each of the stages of learning.

This resource aims to further develop an understanding of the learning across the curriculum content, sustainability, as it unpacks in greater detail, the concept. Sustainability is recognised as one of the key features of a world class curriculum as identified in the Alice Springs (Mparntwe) Education Declaration 2019.

This resource supports the [History K-10 syllabus](https://educationstandards.nsw.edu.au/wps/portal/nesa/k-10/learning-areas/hsie/history-k-10) © NSW Education Standards Authority (NESA) for and on behalf of the Crown in right of the State of New South Wales, 2012, and the [Geography K-10 syllabus](https://educationstandards.nsw.edu.au/wps/portal/nesa/k-10/learning-areas/hsie/geography-k-10) © NSW Education Standards Authority (NESA) for and on behalf of the Crown in right of the State of New South Wales, 2015

## Sustainability

ACARA identifies [cross-curriculum learning](https://www.acara.edu.au/curriculum/foundation-year-10/cross-curriculum-priorities) as fundamental to:

* understanding the ways social, economic, and environmental systems interact to support and maintain human life
* appreciating and respecting the diversity of views and values that influence sustainable development
* participating critically and acting creatively in determining more sustainable ways of living.

Through the priority of Sustainability, students develop the knowledge, skills, values, and world views necessary to contribute to more sustainable patterns of living.

The Sustainability priority has been developed around the three key concepts of systems, world views and futures:

* The first key concept explores the interdependent and dynamic nature of systems that support all life on Earth and our collective wellbeing.
* The second concept enables a diversity of world views on ecosystems, values, and social justice to be discussed and recognised when determining individual and community actions for sustainability.
* The third concept is aimed at building capacities for thinking and acting in ways that are necessary to create a more sustainable future. The concept seeks to promote reflective thinking processes in young people and empower them to design action that will lead to a more equitable and sustainable future.

## The place of sustainability in mandatory geography

The study of [Geography K-10](https://educationstandards.nsw.edu.au/wps/portal/nesa/k-10/learning-areas/hsie/geography-k-10/learning-across-the-curriculum) provides students with opportunities to develop the knowledge, understanding, skills, values, and attitudes necessary for them to act in ways that contribute to more sustainable ways of living. Students have opportunities to develop an understanding that sustainability is focused on environmental protection to create a more ecologically and socially just world and that sustainable living requires environmental, social, cultural, and economic considerations, and informed action.

In geography, students examine the effects of human challenges to sustainability, and strategies to address these. Students evaluate the effects of strategies on environments, economies, and societies, and recognise that they can contribute to actions that support more sustainable ways of living.

### Geography - Stage 4

The following tables provide a limited number of suggested teaching and learning activities to support the integration of the cross-curriculum priority, Sustainability, into teaching and learning programs. This is **not** a teaching and learning program but has been designed to be incorporated into existing teaching and learning programs to suit the contextual needs of your school.

#### Landscape and landforms

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| Syllabus content | Teaching and learning activity ideas | Resources |
| **Changing landscapes**  Students investigate the human causes and effects of land degradation, for example:   * description of the impact of a range of human activities on landscapes   + examination of one type of land degradation including its spatial distribution, causes and impact | Describe the role of humans in land degradation and the impact of degradation on the landscape, for example:   * desertification * soil compaction * salinity * waterlogging * erosion   Choose a degraded landscape for example:   * Aral Sea * Central Asia (salinity)   Create a map showing the spatial distribution of the issue  Provide a summary of the causes of the issue in that location and the impacts on the environment. | * [Soil degradation](https://www.environment.nsw.gov.au/topics/land-and-soil/soil-degradation) * [Desertification](https://www.bbc.co.uk/bitesize/guides/zctymnb/revision/4) – BBC Bitesize * [Waterlogging – the science](https://www.agric.wa.gov.au/waterlogging/waterlogging-%E2%80%93-science) * [The Aral Sea Crisis](http://www.columbia.edu/~tmt2120/environmental%20impacts.htm) * [Salinity management in Central Asia](https://wle.cgiar.org/project/salinity-management-central-asia) |
| **Landscape management and protection**  Students investigate ways people, including Aboriginal and Torres Strait Islander Peoples, manage and protect landscapes, for example:   * description of the nature and extent of landscape protection across a range of scales for example, locally protected places, national parks, world heritage listing * examination of management and protection strategies for one landscape * assessment of the contribution of Aboriginal and Torres Strait Islander Peoples’ knowledge to the use and management of an Australian landscape or landform | Develop a flow chart of the process and impact of World Heritage listing of landscapes at a global level.  Create an infographic to show the nature and extent of protection to environments provided by National Parks or World Heritage listing.  Research the effect National Park listing has had on Bandhavgarh National Park (India). Create an oral presentation on Bandhavgarh National Park from your research. Present it to your class.  Investigate strategies being used to combat desertification in central China. Create a multimedia presentation explaining the strategies and assessing their effectiveness.  Select a World Heritage site from around the world.  Research the site to identify and explain the management and protection strategies being used at that site to preserve it for future generations.  Investigate and assess the effectiveness of fire as a management tool of Aboriginal people in Kakadu National Park.  Address the role of cultural burning as a method of sustainably using the landscape. | * [UNESCO World heritage](https://whc.unesco.org/en/about) * [About Bandhavgarh National park](https://www.bandhavgarh-national-park.com/about-bandhavgarh.html) * [Managing national parks](https://www.nationalparks.nsw.gov.au/about-npws/managing-parks) * [Management of Australia's world heritage properties](https://www.environment.gov.au/heritage/about/world/management-australias-world-heritage-listed) * [The World Heritage Convention](https://whc.unesco.org/en/convention/) * [World Heritage List](https://whc.unesco.org/en/list/) * [China’s “Great green wall” fights expanding desert](https://www.nationalgeographic.com/news/2017/04/china-great-green-wall-gobi-tengger-desertification/) - (duration 3:40) * [Kakadu National Park: Traditional burning methods and modern science form a fiery partnership](https://www.abc.net.au/news/rural/2016-08-12/traditional-owners-fire-management-kakadu/7730254) * [Caring for country](https://parksaustralia.gov.au/kakadu/discover/culture/country/) * [Bininj – Fire management](http://learnline.cdu.edu.au/tourism/kakadu/values/indigenous/firemanagement.html) |

#### Place and liveability

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| Syllabus content | Teaching and learning activity ideas | Resources |
| **Influences and perceptions**  Students investigate factors influencing perceptions of the liveability of places, for example:   * examination of environmental factors that influence perceptions of liveability for example climate, landforms, natural resources * discussion of human factors that influence perceptions of liveability for example culture, income, employment, crime, and safety | Investigate the impact of climate change on the lifestyles and culture of the Inuit people or Pacific island nations such as Nauru, Kiribati, or Tuvalu.  Conduct fieldwork data collection to identify whether sustainable features of a local area, such as recycling programs or community gardens influence people perceptions of the liveability of a particular location. | * [Climate change in the Arctic: An Inuit reality](https://www.un.org/en/chronicle/article/climate-change-arctic-inuit-reality) * ['One day we'll disappear': Tuvalu's sinking islands](https://www.theguardian.com/global-development/2019/may/16/one-day-disappear-tuvalu-sinking-islands-rising-seas-climate-change) * [Pacific climate change](https://web.whoi.edu/coastal-group/research/projects/pacific-climate-change/) |
| **Environmental quality**  Students investigate the impact of environmental quality on the liveability of places, for example:   * discussion of factors that reduce environmental quality for example natural hazard, conflict, population pressures, land degradation * comparison of the impact of environmental quality on the liveability of places across a range of scales for example local neighbourhoods, large cities, countries | Explain the impact of the following factors on the liveability of a place (consider the impact on these factors on the sustainability of a location):   * natural hazards * conflict * over-population (or under-population) * land degradation.   Identify locations around the world where these factors are impacting the liveability of that place.  Discuss the specific impact of these factors on that location.  Brainstorm factors that affect environmental quality of location, for example:   * air quality * access to green spaces * renewable energy * sustainable food.   Compare the impact of these factors on sustainability at a range of scales including:   * local neighbourhoods * suburbs * towns/cities. |  |
| **Enhancing liveability**  Students investigate strategies used to enhance the liveability of places using examples from different countries, for example:   * identification of the characteristics of places considered highly liveable * examination of a range of strategies used to enhance liveability * assessment of the role of governments, non-government organisations, communities, and individuals in enhancing liveability * proposal of strategies to improve the liveability of a place in Australia | Conduct a survey (within the class, for example) to identify the environmental factors or environmental strategies, that enhance the liveability of a location, for example:   * sustainable infrastructure (solar powered street lights) * community gardens and farms * sustainability and recycling programs.   Access your school’s local council. Investigate the range of sustainability programs the council is running. Assess the impact and success of these programs.  Identify a local non-government organisation (NGO), for example Landcare, that is involved in sustainability work.  Examine the work they undertake and write a report on the success of their work in achieving sustainability goals in the local area.  Research the United Nations Sustainable development goals. Evaluate the progress that has been made towards achieving those goals.  Propose three strategies to enhance the sustainable practices of your school.  Develop a plan to implement those practices at your school. | * [Landcare Australia](https://landcareaustralia.org.au/) * [United Nations Sustainable development goals](https://sdgs.un.org/goals) * [Asia-Pacific Sustainable Development Goals](https://www.asia-pacific.undp.org/content/rbap/en/home/sustainable-development-goals.html) * [Sustainable Schools](https://www.sustainableschoolsnsw.org.au/) * [Sustainable schools’ grants](https://www.schoolinfrastructure.nsw.gov.au/programs/sustainable-schools-grants.html) * [Clean up Australia](https://www.cleanup.org.au/) |

#### Water in the World

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| Syllabus content | Teaching and learning activity ideas | Resources |
| **Water scarcity and water management**  Students investigate the nature of water scarcity and ways of overcoming it, for example:   * description of the nature, extent and causes of water scarcity in different countries * assessment of strategies used to overcome water scarcity and the role of governments, non-government organisations, individuals, and communities in sustainable water management * proposal of individual actions contributing to water management | Conduct research into the issue of water scarcity around the world. Create a map identifying some of the locations where water scarcity is an issue. For one of those locations describe the causes of water scarcity.  Investigate the concept of the worlds water wars. What are they, where are they, and why are they occurring?  Research BASIX building requirements in NSW. Explain what they are. Create an infographic to assess their effectiveness.  Research and create a short story about William Kamkwamba, the boy who harnessed the wind.  Students undertake a water audit of the school or their home. Identify strategies that can be used to improve water sustainability.  Conduct water quality monitoring at a local water source using Streamwatch guidelines and upload your results.  Students time how long they take showers for and calculate the amount of water they use.  Calculate how much water they would save by having four-minute showers.  Make four-minute shower timers to distribute to the class. | * [United Nations - water scarcity](https://www.unwater.org/water-facts/scarcity/) * [Water scarcity - overview](https://www.worldwildlife.org/threats/water-scarcity) * [Global water crisis: Facts, FAQs, and how to help](https://www.worldvision.com.au/global-water-crisis-facts) * [What You Need to Know About the World's Water Wars](https://www.nationalgeographic.com/news/2016/07/world-aquifers-water-wars/) * [The Making of World Water Wars](https://ourworld.unu.edu/en/the-making-of-world-water-wars) * [NSW Department of Planning, Industry and Environment - Basix](https://www.planningportal.nsw.gov.au/basix) * [William Kamkwamba](http://www.williamkamkwamba.com/) * [The boy who harnessed the wind](https://www.imdb.com/title/tt7533152/) * [William Kamkwamba - TED speaker](https://www.ted.com/speakers/william_kamkwamba) * Sydney Water – [Water wise tips](https://www.sydneywater.com.au/SW/your-home/using-water-wisely/water-wise-tips/index.htm) * [Water audit](https://www.sydneywater.com.au/sw/education/programs-resources/highschool/water-audit/index.htm) * [Streamwatch](https://www.streamwatch.org.au/) |
| **The value of water**  Students investigate the economic, cultural, spiritual, and aesthetic values of water for people, including Aboriginal and Torres Strait Islander Peoples and or peoples of the Asia region, for example:   * description of the ways water is used by people for example agricultural, commercial, industrial, and recreational uses | Brainstorm the variety of different ways that water is used in Australia.  Investigate and describe the production of water intensive crops in Australia for example cotton or rice.  Investigate the irrigation systems of Cubbie station cotton farm in Queensland.  Access statistics to compare the water efficiency of a variety agricultural practices in Australia | * [Murray-Darling Basin Plan: How much water is used to grow cotton?](https://www.abc.net.au/news/rural/2017-07-25/murray-darling-basin-plan-how-much-water-to-grow-cotton/8742234) * [Cotton’s water use](https://cottonaustralia.com.au/cottons-water-use) * [Cubbie Station](https://cubbie.com.au/) * [Water Use on Australian Farms](https://www.abs.gov.au/statistics/industry/agriculture/water-use-australian-farms/latest-release) |

#### Interconnections

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| Syllabus content | Teaching and learning activity ideas | Resources |
| **Personal connections**  Students investigate the influences on and effects of, people’s travel and recreational, cultural or leisure connections with different places for the future, for example:   * examination of the impact of people’s travel, recreational, cultural and/or leisure activities on the future of places * explanation of the impacts of a selected travel, recreational, cultural or leisure activity on a place, implications for the future of that place and strategies to achieve sustainability | Research and create a multimedia report on the impacts of over tourism.  Address the issue the sustainability of places and the changes that have occurred in those places due to tourism.  Undertake a case study of Bali and the changes that have occurred since tourism first began there in the 1970s.  Choose a significant site of tourism and explore the impacts of tourism on that location. Identify and explain the strategies that have been implemented in that location to ensure its sustainability for example:   * The Overland Track, Tasmania * Mountain gorillas in Rwanda * Galapagos Islands   Examine the impact of tourism on water resources at Angkor Wat.  Undertake a case study of deliberate non-interconnection – The Sentinelese of North Sentinel Island - examine the reasons for and processes to prevent contact with the island’s indigenous inhabitants and ensure their capacity to sustain their existing lifestyle and culture. | * [Thailand's Maya Bay from DiCaprio film 'The Beach' closed to tourists | ITV News](https://www.youtube.com/watch?v=3n_gqj0OH3Q&feature=emb_logo) (duration 1:54) * [Climbers create traffic jam in Everest's "death zone"](https://www.youtube.com/watch?v=XyKUW72b9rE) (duration 2:22) * [Overland Track](https://parks.tas.gov.au/explore-our-parks/cradle-mountain/overland-track) * [How Much Tourism Can the Galapagos Tolerate Sustainably?](https://blog.nationalgeographic.org/2017/05/03/how-much-tourism-can-the-galapagos-tolerate-sustainably/) * [Tourism: Boon or threat for the Galapagos?](https://www.dw.com/en/tourism-boon-or-threat-for-the-galapagos/a-36930500) * [Angkor water crisis](https://en.unesco.org/courier/2017-april-june/angkor-water-crisis) * [North Sentinel Island: How can the Sentinelese people avoid contact with the outside world?](https://www.abc.net.au/news/2018-11-22/how-can-the-sentinelese-people-stay-away-from-the-outside-world/10521126) * [Protect Indigenous people](https://www.thehindu.com/opinion/op-ed/protect-indigenous-people/article25616520.ece) |
| **Technology**  Students investigate the way transportation and information and communication technologies are used to connect people to services, information, and people in other places, for example:   * assessment of the impact of increasing global connectivity on people and places | Conduct research (via surveys or interviews for example) on the ways in which the CoViD-19 pandemic changed the way people engaged and interacted with other places.  Assess the efficacy of online engagements with people and places compared to face to face interactions. | * Surveys can be constructed and analysed using Microsoft Forms and Google forms. |
| **Production and consumption**  Students investigate the effects of the production and consumption of goods on people, places, and environments throughout the world, for example:   * examination of environmental, social, and economic impacts of production and consumption of consumer goods * assessment of the effect of production or consumption of goods on one place or environment * explanation of responses by governments, groups, and individuals to minimise the effects of production and consumption | Research the palm oil industry in South-East Asia.  Create a report for an NGO. In groups (one impact per group) research the various aspects and impacts of palm oil production:   * environmental * social * economic * assessment of the effect of production on a specific location   Students collate their findings into a single report for actual or hypothetical submission to WWF or a similar group.  Research and report on the work of an NGO such as Rainforest Alliance. Explain the significance of the Rainforest Alliance symbol on products. | * [Decoupling natural resource use and environmental impacts from economic growth (Summary)](https://www.unenvironment.org/resources/report/decoupling-natural-resource-use-and-environmental-impacts-economic-growth-0) – free download of this report available from the UNEP. * [WWF](https://www.wwf.org.au/) * [WWF - Palm oil - overview](https://www.worldwildlife.org/industries/palm-oil) * [What is palm oil?](https://www.palmoilinvestigations.org/about-palm-oil.html) * [Palm oil – deforestation for everyday products](https://www.rainforest-rescue.org/topics/palm-oil) * [Rainforest alliance](https://www.rainforest-alliance.org/) |

### Geography - Stage 5

The following tables provide a limited number of suggested teaching and learning activities to support the integration of the cross-curriculum priority, Sustainability into teaching and learning programs. This is not a teaching and learning program but has been designed to be incorporated into existing teaching and learning programs to suit the contextual needs of your school.

#### Sustainable biomes

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| Syllabus content | Teaching and learning activity ideas | Resources |
| **Changing biomes**  Students investigate the human alteration of biomes to produce food, industrial materials and fibres and the environmental effects of these alterations, for example:   * examination of human alterations to the physical characteristics of biomes for example vegetation removal, agriculture, land terracing, irrigation, mining * assessment of environmental impacts of human alterations to biomes for example habitat and biodiversity loss, water pollution, salinity * discussion of successful sustainability strategies that minimise environmental impacts | Research land terracing in Bali, Ifugao or another location. Create a multimedia presentation to explain the process of altering the landscape to facilitate crop production.  Describe the increase in arable land through the process of terracing.  Conduct research on the environmental impacts of terrace cultivation. Based on your research, write a short report to a local council in an area where there Is terracing.  Explain the impacts of terracing and suggest solutions to issues identified. | * [What is terrace farming?](https://www.worldatlas.com/articles/what-is-terrace-farming.html) * [Environmental Impacts of Agricultural Modifications](https://www.nationalgeographic.org/article/environmental-impacts-agricultural-modifications/) * [Terracing practice increases food security and mitigates climate change in East Africa](https://ccafs.cgiar.org/blog/terracing-practice-increases-food-security-and-mitigates-climate-change-east-africa#.X7MnGWgzaUk) * [Sustainable agriculture kits for terrace farmers in Nepal](https://www.idrc.ca/en/research-in-action/sustainable-agriculture-kits-terrace-farmers-nepal) |
| **Biomes produce food**  Students investigate environmental, economic, and technological factors that influence agricultural yields in Australia and across the world, for example:   * explanation of how technology is used to increase agricultural yields for example innovations and advancements in farming practices | Investigate industrial farming in the US for example:   * soya bean * corn * animal feedlots.   Explore the environmental issues associated with this type of large scale monocropping:   * transport pollution * use of fertilisers and runoff to the surrounding environment * use of pesticides | * [Industrial agriculture](https://globalforestatlas.yale.edu/land-use/industrial-agriculture) * [Student Project: Factory Farming: Environmental Impacts](https://libraryguides.law.pace.edu/c.php?g=452979&p=3107602) * [Factory farms provide abundant food, but environment suffers](https://www.pbs.org/newshour/economy/factory-farms-provide-abundant-food-but-environment-suffers) * [Soybean production](https://www.soyconnection.com/growing-soybeans/us-soybean-production) |
| **Challenges to food production**  Students investigate environmental challenges to food production for Australia and other areas of the world, for example:   * description of the impact of water scarcity and pollution on food production * discussion of the impact of land degradation and competing land uses on food production for example urban expansion, biofuel production * assessment of the extent to which climate change can affect the capacity of countries to increase food production | Create a collage of images and annotations to describe the impact of water scarcity on food production.  Conduct research into the impact of air pollution on crop yields and write a concise report on the impacts for local farmers of an affected area.  Conduct a class debate on the topic of food vs fuel - should we use arable land for food production or to produce crops for biofuels.  Obtain a range of cartoons presenting the food vs fuel debate and analyse the messages of the cartoons.  Investigate the role of climate change in affecting the patterns of ENSO and the IOD.  What is the impact of these climate patterns on the productivity of biomes in Australia and Asia? For example:   * extended droughts * flooding * variable river flows * weather extremes. | * [Water Scarcity – One of the greatest challenges of our time](http://www.fao.org/fao-stories/article/en/c/1185405/) * [Air pollution and food production](https://www.unece.org/environmental-policy/conventions/envlrtapwelcome/cross-sectoral-linkages/air-pollution-and-food-production.html) * [Why air pollution reduces crop yields](https://www.weforum.org/agenda/2014/11/air-pollution-reduces-crop-yields/) * [Feeding a hot, hungry world](https://www.science.org.au/curious/earth-environment/feeding-hot-hungry-world) * [BOM – Long range weather and climate](http://www.bom.gov.au/climate/) * [Understanding ENSO](https://www.youtube.com/watch?v=dzat16LMtQk) (duration 4:13) * [Climate dogs: The main drivers that influence climate in NSW](https://www.dpi.nsw.gov.au/climate-and-emergencies/seasonal-conditions/climatedogs) |
| **Food security**  Students investigate the capacity of the world’s biomes to achieve sustainable food security for Australia and the world, for example:   * assessment of the capacity of biomes to produce food into the future * analysis of population projections to predict future demand for food * examination of sustainable practices used to achieve food security * discussion of the potential for Australia to contribute to global food security | Access the Department of Agriculture information on Australia’s food security and the Bureau of Meteorology’s information on climate outlooks.  Write a short opinion piece, backed by evidence, for your local newspaper to assess the capacity of Australia’s biomes to produce food into the future.  Begin with a brief reference to Thomas Malthus and “positive checks” on population.  Conduct a class debate - was Malthus correct? Ensure the debate focuses on the capacity of the world to feed itself, factoring in predicted population rises.  Discuss strategies to achieve food security around the world.  Identify and explain the role of Australia and our capacity to produce agricultural surpluses, in contributing to global food security. | * [Analysis of Australia’s food security and the COVID-19 pandemic](https://www.agriculture.gov.au/abares/publications/insights/australian-food-security-and-COVID-19) * BOM - [Climate outlook overview](http://www.bom.gov.au/climate/outlooks/#/overview/summary) * [Reading: Demographic Theories](https://courses.lumenlearning.com/suny-herkimer-intro-to-sociology-1/chapter/reading-demographic-theories/) (duration 3:53) * [Does population growth lead to hunger and famine?](https://ourworldindata.org/population-growth-and-famines) * [The state of food security and nutrition in the world?](http://www.fao.org/state-of-food-security-nutrition) * [Analysis of Australia’s food security and the COVID-19 pandemic](https://www.agriculture.gov.au/abares/publications/insights/australian-food-security-and-COVID-19) |

#### Changing places

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| Syllabus content | Teaching and learning activity ideas | Resources |
| **Causes and consequences of urbanisation**  Students investigate the causes and consequences of urbanisation with reference to one Asian country, for example:   * examination of economic, social, or environmental consequences of urbanisation | Create PMI chart to identify the positive and negative aspects of urbanisations with regards to achieving sustainable urban areas. | * [Global cities achieving carbon neutrality before 2050](https://carbonneutralcities.org/) * [Working together to make Adelaide one of the world’s first carbon neutral cities.](https://www.cityofadelaide.com.au/about-adelaide/our-sustainable-city/carbon-neutral-adelaide/) * [Climate emergency: how our cities can inspire change](https://www.weforum.org/agenda/2020/01/smart-and-the-city-working-title/) * [Population and Resources](https://www.internationalaffairs.org.au/australianoutlook/population-and-resources/) |
| **Urban settlement patterns**  Students investigate differences in urban settlement patterns between Australia and another country, for example:   * assessment of the consequences of urban concentrations on the characteristics, liveability, and sustainability of places | Investigate the sustainability consequences of overpopulation and underpopulation.  Investigate and report on the impact of population density on the efficiency of use of resources, such as infrastructure, pollution, and waste management. | * [Population and environment: a global challenge](https://www.science.org.au/curious/earth-environment/population-environment) * [Outpacing Earth's carrying capacity](https://www.science.org.au/curious/outpacing-earth) |
| **Internal migration**  Students investigate reasons for and effects of internal migration in Australia and another country, for example:   * discussion of economic, social, or environmental consequences of internal migration on places of origin and destination | Investigate the impacts of localised population growth on the surrounding environment, such as due to forced migrations due to natural disasters or conflict. | * [Hunger and war](https://www.nationalgeographic.org/article/hunger-and-war/?utm_source=BibblioRCM_Row) * [Famine](https://www.nationalgeographic.org/encyclopedia/famine/) |
| **Australia’s urban future**  Students investigate the management and planning of Australia’s urban future, for example:   * discussion of the implication of population forecasts for the future growth and sustainability of urban places * explanation of strategies used to create economically, socially, and environmentally sustainable urban places * proposal of ways for individuals and communities to contribute to a sustainable urban future | Brainstorm and explore a range of issues that will arise as populations increase, for example:   * pollution * waste management * access to fresh water * habitat loss * food security   Access your local council’s website. Examine the range of sustainability projects and goals being pursued by the council.  Identify, explore, and propose a range of sustainability strategies that could be implemented at your school. | * [Urban sustainability](https://www.aph.gov.au/Parliamentary_Business/Committees/House/ITC/DevelopmentofCities/Report/section?id=committees%2Freportrep%2F024151%2F25692) * [Pressures affecting the coastal environment - Coasts (2016, 2011)](https://soe.environment.gov.au/assessment-summary/coasts/pressures-affecting-coastal-environment) * [Urban threats](https://www.nationalgeographic.com/environment/habitats/urban-threats/) * [Looking for a council in NSW?](https://lgnsw.org.au/Public/Public/NSW-Councils/NSW-Council-Links.aspx) * [Getting started with sustainability in schools](https://sustainabilityinschools.edu.au/) * [Sustainable schools’ grants](https://www.schoolinfrastructure.nsw.gov.au/programs/sustainable-schools-grants.html) * [Sustainable schools NSW](https://www.sustainableschoolsnsw.org.au/) |

#### Environmental change and management

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| Syllabus content | Teaching and learning activity ideas | Resources |
| **Environmental management**  Students investigate environmental management, including various worldviews and the management approaches of Aboriginal and Torres Strait Islander Peoples, for example:   * discussion of varying environmental management approaches and perspectives | Examine the environmental worldview of Aboriginal and Torres Strait Islander peoples. Explain how this world view is reflected in their land and water management practices. Compare these management strategies with traditional western management strategies undertaken in Australia. Bushfire management and hazard reduction could be undertaken as a case study. | * [Indigenous fire practices have been used to quell bushfires for thousands of years, experts say](https://www.abc.net.au/news/2020-01-09/indigenous-cultural-fire-burning-method-has-benefits-experts-say/11853096) * [Indigenous fire management](https://www.klc.org.au/indigenous-fire-management) * [10/50 vegetation clearing](https://www.rfs.nsw.gov.au/plan-and-prepare/1050-vegetation-clearing) |
| **Investigative study**  Select one type of environment in Australia as the context for a comparative study with at least one other country.  Students investigate the causes, extent, and consequences of the environmental change   * examination of the causes and extent of change to the environment in each country * analysis of the short and long-term consequences of the environmental change in each country   Students investigate the management of the environmental change, for example:   * discussion of the factors influencing the management responses in each country for example worldviews, competing demands, technology, climate change * comparison and evaluation of the effectiveness of the management responses in achieving environmental sustainability * proposal of how individuals could contribute to achieving environmental sustainability for the environment in each country | Choose an environment or habitat close to your school. Considering the factors affecting climate (latitude, continentality, altitude), identify a location in another country with a similar environment or habitats. Examine and compare and contrast environmental change in each location  In groups, students identify and explore the impacts of environmental change in each country chosen. Each group explores one aspect only.  Conduct a [Jigsaw](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/546?clearCache=27d99a64-e925-51f2-b3f0-4dd480c2eecf) task to investigate factors that influence management responses to environmental change in each country including:   * worldviews * competing demands * technology * climate change   Investigate specific actions to address environmental change in each country. Prepare a briefing for your local council comparing and evaluating the effectiveness of the responses in each location.  In the report include proposals of how each location could improve its response to environmental change. |  |

### Stage 4 geography lesson guide

**Teacher note – below are some** suggested lesson ideas which have been designed to be adjusted for your school’s specific context. Outcomes and syllabus content are included as a guide, but students may not meet the entirety of the included outcome or content points through these tasks and may need further support.

#### Sustainability – Water in the World

##### Outcome

GE4-5 discusses management of places and environments for their sustainability

##### Inquiry question

What approaches can be used to sustainably manage water resources and reduce water scarcity?

##### Selected syllabus content

**Water scarcity and water management**

Students investigate the nature of water scarcity and ways of overcoming it, for example – assessment of strategies used to overcome water scarcity and the role of governments, non-government organisations, individuals, and communities in sustainable water management

##### Learning intention

To explore and assess strategies used by individuals and communities to overcome water scarcity and address sustainability.

##### Guiding inquiry questions

* Investigate the story of William Kamkwamba and the work he undertook to address issues of water scarcity in his village. Examine the work completed to promote sustainable agricultural practices after his initial work in his village.
* Explore strategies used by individuals to overcome water scarcity and enhance sustainability.
* Discuss the effectiveness of local and community strategies for addressing issues of water scarcity and sustainability.

### Stage 5 geography lesson guide

**Teacher note – below are some** suggested lesson ideas which have been designed to be adjusted for your school’s specific context. Outcomes and syllabus content are included as a guide, but students may not meet the entirety of the included outcome or content points through these tasks and may need further support.

#### Sustainability – Sustainable biomes

##### Outcome

GE5-3 analyses the effect of interactions and connections between people, places, and environments

##### Inquiry question

Analysis of the long-term sustainability of industrial agriculture production techniques.

##### Selected syllabus content

**Biomes produce food**

Students investigate environmental, economic, and technological factors that influence agricultural yields in Australia and across the world, for example:

* explanation of how technology is used to increase agricultural yields for example innovations and advancements in farming practices.

##### Learning intention

To investigate and understand the environmental impacts of large-scale industrial agriculture.

##### Guiding inquiry questions

* Investigate the scale and processes of industrial agriculture, particularly as undertaken in the USA.
* Explain the inputs and outputs of this type of agriculture.
* Discuss the long-term sustainability of this type of agriculture.

## The place of sustainability in mandatory history

[History K-10](https://educationstandards.nsw.edu.au/wps/portal/nesa/k-10/learning-areas/hsie/history-k-10/learning-across-the-curriculum) enables the development of students’ world views, particularly in relation to actions that require judgement about past societies and their access to and use of the Earth’s resources. Students are provided with opportunities to develop an historical perspective on sustainability by understanding, for example, the emergence of farming and settled communities, the positive and negative impacts of peoples and governments on pre-modern environments, the development of the Industrial Revolution and the growth of population, the overuse of natural resources, the rise of environmental movements as well as the global energy crisis and innovative technological responses to it. Making decisions about sustainability to help shape a better future requires an understanding of how the past relates to the present, and needs to be informed by historical trends and experiences.

### History - Stage 4

The following tables provide a limited number of suggested teaching and learning activities to support the integration of the cross-curriculum priority, Sustainability, into teaching and learning programs. This is **not** a teaching and learning program but has been designed to be incorporated into existing teaching and learning programs to suit the contextual needs of your school.

#### Investigating the ancient past

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| Syllabus content | Teaching and learning activity ideas | Resources |
| Students briefly outline:   * key features of ancient societies (farming, trade, social classes, religion, rule of law)   The nature of the sources for ancient Australia and what they reveal about Australia's past in the ancient period, such as the use of resources  Students:   * locate and describe a variety of sources for ancient Australia, for example, animal and human remains, tools, middens, art and stories and sites related to the Dreaming * investigate what these sources reveal about Australia's ancient past | Investigate the agricultural practices of Aboriginal peoples in ancient Australia.  Create a multimedia report on Aboriginal Australians’ agriculture practices prior to European invasion to present to the school. | * Young Dark Emu – Bruce Pascoe * [Deadly Story – Food and agriculture](https://www.deadlystory.com/page/culture/Life_Lore/Food) * [Rethinking Indigenous Australia's agricultural past](https://www.abc.net.au/radionational/programs/archived/bushtelegraph/rethinking-indigenous-australias-agricultural-past/5452454) * [ACARA – teacher background information – Year 8 Science content description](https://www.australiancurriculum.edu.au/TeacherBackgroundInfo?id=56786) * [Evidence for Indigenous Australia agriculture](http://www.australasianscience.com.au/article/issue-july-august-2010/evidence-indigenous-australian-agriculture.html) |
| The importance of conserving the remains of the ancient past, including the heritage of Aboriginal and Torres Strait Islander peoples  Students:   * identify ancient sites that have disappeared, or are threatened or have been protected and preserved, Uluru * identify some methods of preserving and conserving archaeological and historical remains * describe an Australian site which has preserved the heritage of Aboriginal and Torres Strait Islander peoples | Investigate the Anangu people and Uluru. Explain the reasons for the banning of climbing on Uluru  Research Lake Mungo and the preservation of Aboriginal culture there. Explain three strategies being used to ensure the sustainability of the area. | * [Anangu culture](https://parksaustralia.gov.au/uluru/discover/culture/) * [Uluru climb closure](https://parksaustralia.gov.au/uluru/discover/culture/uluru-climb/) * [Why Australia is banning climbers from this iconic natural landmark](https://www.nationalgeographic.com/travel/destinations/oceania/australia/uluru-closing-why-it-matters/) * [Uluru climbing ban: Tourists scale sacred rock for final time](https://www.bbc.com/news/world-australia-50151344) * [Mungo National park](https://www.nationalparks.nsw.gov.au/visit-a-park/parks/mungo-national-park/what-we-are-doing) * [Looking after Mungo](http://www.visitmungo.com.au/looking-after-mungo) |

#### The Mediterranean World

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| Syllabus content | Teaching and learning activity ideas | Resources |
| The physical features of the ancient society and how they influenced the civilisation that developed there  Students:   * describe the geographical setting and natural features of the ancient society * explain how the geographical setting and natural features influenced the development of the society | Investigate he geographical setting of an ancient society (Egypt, Greece, Rome). Explore the geographical processes that affected the area and supported a sustainable society to develop in that place. Create a flow chart to visualise these processes.  Explain why the agricultural practices of the people in your chosen area were sustainable. | * [Ancient Egyptian Agriculture](http://www.fao.org/country-showcase/item-detail/en/c/1287824/) * [Past as Prologue - Ancient Rome offers lessons on the importance of sustainable development](https://www.imf.org/external/pubs/ft/fandd/2019/03/ancient-rome-and-sustainable-development-annett.htm) |

#### The Asian World

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| Syllabus content | Teaching and learning activity ideas | Resources |
| The physical features of the ancient society and how they influenced the civilisation that developed there  Students:   * describe the geographical setting and natural features of the ancient society * explain how the geographical setting and natural features influenced the development of the ancient society | Investigate the geographical setting of an ancient society (China or India).  Explore the geographical processes that affected the area and supported a sustainable society to develop in that place, for example:   * annual flooding * snowmelt feeding rivers   Explain why the agricultural practices of the people in your chosen area were sustainable. | * [Sustainable ancient aquaculture](https://blog.nationalgeographic.org/2013/07/11/sustainable-ancient-aquaculture/) * [Floods on the Yellow river](https://earthobservatory.nasa.gov/images/19723/floods-on-the-yellow-river) * [World of Change: Seasons of the Indus River](https://earthobservatory.nasa.gov/world-of-change/Indus) * Teacher resource - [Role of snow and glacier melt in controlling river hydrology in Liddar watershed (western Himalaya) under current and future climate](https://agupubs.onlinelibrary.wiley.com/doi/full/10.1029/2011WR011590) |

#### Angkor Khmer Empire (c. AD 802 – c. 1431)

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| Syllabus content | Teaching and learning activity ideas | Resources |
| The cultural achievements of the Khmer civilisation, including its system of water management and the building of the temples of Angkor  Students:   * using a range of sources and the site of Angkor as an historical source, describe what it reveals about Angkor Khmer life and culture. This could include the system of water management | Research and explain the way water was used and controlled at Angkor Wat.  Identify and describe any issues you can ascertain that could arise if the flow of water to Angkor Wat reduced. | * [Water Technologies of the Khmer Civilization: Angkor](https://ancientwatertechnologies.com/2015/05/21/water-technologies-of-the-khmer-civilization-angkor/) |
| Theories of the decline of Angkor, such as the overuse of water resources, neglect of public works as a result of ongoing war, and the effects of climate change  Students outline theories about the decline of Angkor and assess which factors were most significant | Investigate a range of theories concerning the decline of Angkor, with a focus on the impact of drought, failure to maintain public works that controlled the movement of water | * [Angkor Wat’s collapse from climate change has lessons for today](https://www.nationalgeographic.com/news/2017/04/angkor-wat-civilization-collapsed-floods-drought-climate-change/) * [How Water Built and Destroyed This Powerful Empire](https://www.youtube.com/watch?v=yytrFWa-OH0) – (duration: 1:49) * [How flooding could be to blame for the demise of Angkor Wat](https://www.independent.co.uk/environment/flooding-angkor-wat-cambodia-ancient-demise-a8598011.html) * [The fall of Angkor](https://www.youtube.com/watch?v=gEH-0jYdUlA) (duration 3:58) |

#### Japan under the Shoguns (c. AD 794 – 1867)

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| Syllabus content | Teaching and learning activity ideas | Resources |
| The use of environmental resources in Shogunate Japan and the forestry and land use policies of the Tokugawa Shogunate  Students:   * describe how the Japanese used land and forests as resources * outline the Tokugawa Shogunate's policies on forestry and land use | Create an explanatory timeline reflecting changes in Japan’s use of forests from:   * resources for wood * deforestation to create arable land * forestry management policies of the Tokugawa period. | * [The Sun and the Forests](https://www.japanfs.org/en/edo/edo_id034141.html) * [Japan's Forests: Good Days and Bad --Rhythms of Damage and Recovery](https://aboutjapan.japansociety.org/japans_forests_good_days_and_bad_--rhythms_of_damage_and_recovery_-) |

#### The Polynesian expansion across the Pacific (c. AD 700 – 1756)

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| Syllabus content | Teaching and learning activity ideas | Resources |
| The way Polynesian societies used environmental resources (sustainably and unsustainably), including the extinction of the moa in New Zealand, the use of religious/supernatural threats to conserve resources, and the exploitation of Easter Island's palm trees  Students describe key environmental resources of Polynesian societies | Explore and describe the availability of key natural resources for Polynesian societies, for example:   * forests * terrestrial animals for food * birds * fish * water | * [Polynesia, an introduction](https://www.khanacademy.org/humanities/art-oceania/oceania-peoples-and-places/polynesia/a/polynesia-an-introduction) |
| Students assess Polynesian uses of environmental resources in this period, including:   * the extinction of the moa in New Zealand * the use of religious/supernatural threats to conserve resources * the exploitation of Easter Island's palm trees | Examine the extinction of the Moa in New Zealand. Identify and explain the reasons for the extinction of the Moa.  Explore and explain the concept of rahui.  Explain how rahui led to the conservation of resources.  Investigate and create a report on the exploitation of Easter Island’s forests by the original inhabitants of the island. Discuss the impact of deforestation on the island’s sustainability. | * [DNA Points to Human Role in Moa Extinction](http://www.australasianscience.com.au/article/issue-april-2013/dna-points-human-role-moa-extinction.html) * [Dead as the moa: oral traditions show that early Māori recognised extinction](https://theconversation.com/dead-as-the-moa-oral-traditions-show-that-early-maori-recognised-extinction-101738) * [The rahui: A tool for environmental protection or for political assertion?](http://press-files.anu.edu.au/downloads/press/p337293/html/introduction.xhtml) * [Maori religion and mythology part 2 - Rahui](http://nzetc.victoria.ac.nz/tm/scholarly/tei-Bes02Reli-t1-body-d3-d6.html) * [Consequences of Deforestation on Easter Island](https://rainforests.mongabay.com/09easter_island.htm) |

#### Aboriginal and Indigenous Peoples, Colonisation and Contact History

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| Syllabus content | Teaching and learning activity ideas | Resources |
| The nature of colonisation of one Indigenous community such as North America, the Pacific region, China, Africa, South-east Asia, or South Asia  Students describe the main features of the chosen Indigenous culture prior to colonisation | Choose an Indigenous society from one of the following:   * North America * the Pacific region * China * Africa * South-east Asia * South Asia   Conduct a jigsaw activity on your chosen society. In groups, students research and report on the following features of the society prior to colonisation:   * geography and environment inhabited by the society * diet * agricultural practices * sustainability of these practices |  |

### History - Stage 5

The following tables provide a limited number of suggested teaching and learning activities to support the integration of the cross curriculum priority, Sustainability, into teaching and learning programs. This is not a teaching and learning program but has been designed to be incorporated into existing teaching and learning programs to suit the contextual needs of your school.

#### The Industrial Revolution (1750–1914)

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| Syllabus content | Teaching and learning activity ideas | Resources |
| The technological innovations that led to the Industrial Revolution, and other conditions that influenced the industrialisation of Britain (the agricultural revolution, access to raw materials, wealthy middle class, cheap labour, transport system and expanding empire) and of Australia  Students identify the raw materials Britain obtained from its empire, for example sugar from Jamaica, wool from Australia, and cotton and tea from India | Create a map of the locations of the raw material inputs required by Britain for its industrialisation.  Brainstorm as a class the possible environmental costs and sustainability of England obtaining these resources from around the world. | * Teacher resource - [The Trade of the British Empire](https://www.jstor.org/stable/2339779?seq=1) * [Trade route chart of the British Empire](https://www.bl.uk/collection-items/trade-route-chart-of-the-british-empire) * [Symbiosis: Trade and the British Empire](http://www.bbc.co.uk/history/british/empire_seapower/trade_empire_01.shtml) * [A Quick Exploration of Ten Nineteenth Century British Imports](http://tradingconsequences.blogs.edina.ac.uk/2014/04/08/a-quick-exploration-of-ten-nineteenth-century-british-imports/) |
| The short and long-term impacts of the Industrial Revolution, including global changes in landscapes, transport, and communication  Students discuss positive and negative consequences of the Industrial Revolution, for example the growth of cities and pollution and the development of trade unions | Identify the sources and types of pollution caused by the industrial revolution.  Research and graph the increase in CO2 emissions into the atmosphere from before the industrial revolution until the present day. | * [What are the greenhouse gas changes since the Industrial Revolution?](https://www.acs.org/content/acs/en/climatescience/greenhousegases/industrialrevolution.html) * [Graphic: The relentless rise of carbon dioxide](https://climate.nasa.gov/climate_resources/24/graphic-the-relentless-rise-of-carbon-dioxide/) * [A brief history of the Earth's CO2](https://www.bbc.com/news/science-environment-41671770) |
| Students assess the short-term and long-term impacts of the Industrial Revolution, including global changes in landscapes | Examine a range of images of locations before and after large scale mining occurred in that location, particularly mining of coal.  Describe and assess the extent of the changes both visible and considering pollution in the local environment.  Examine the long-term impact of changes to the environment due to the industrial revolution.  Based on your research, make a judgement on the sustainability of changes that began with the industrial revolution. | * [As climate change alters beloved landscapes, we feel the loss](https://www.nationalgeographic.com/magazine/2020/04/climate-change-alters-beloved-landscapes-we-experience-solastalgia-feature/) |
| Students assess the short-term and long-term impacts of the Industrial Revolution, including transport | Investigate and describe the changes in the capability of transport ships from sail in the pre-industrial era to steam powered post-industrial revolution for example:   * size * speed * carrying capacity * pollution emissions   Create a T-chart to show the changes from sail powered seaborne transport to modern seaborne transport. |  |

#### Movement of peoples (1750–1901)

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| Syllabus content | Teaching and learning activity ideas | Resources |
| The influence of the Industrial Revolution on the movement of peoples throughout the world, including the transatlantic slave trade and convict transportation  Students explain how the agricultural revolution caused British people to move from villages to towns and cities to create a cheap labour force. | Examine changes to the sustainability of cities, as populations grew due to movements of people at the beginning of the industrial revolution, for example:   * increased demand for food * demand for potable water * sewerage systems * air quality * loss of habitats * demand for raw materials for building | * [As urbanization grows, cities unveil sustainable development solutions on World Day](https://news.un.org/en/story/2019/10/1050291) * [3 Big Ideas to Achieve Sustainable Cities and Communities](https://www.worldbank.org/en/news/immersive-story/2018/01/31/3-big-ideas-to-achieve-sustainable-cities-and-communities) * [Urban sustainability](https://www.aph.gov.au/Parliamentary_Business/Committees/House/ITC/DevelopmentofCities/Report/section?id=committees%2Freportrep%2F024151%2F25692) |

#### Making a nation

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| Syllabus content | Teaching and learning activity ideas | Resources |
| The extension of settlement, including the effects of contact (intended and unintended) between European settlers in Australia and Aboriginal and Torres Strait Islander peoples  Students describe both the European impact on the landscape and how the landscape affected European settlement | Examine the quantity, extent, and impact of deforestation on the east coast of Australia.  Create an infographic showing the quantity of deforestation in Australia following European settlement.  How did European farming practices affect the landscape of Australia? | * [The impact of colonial settlement on the environment](https://www.naa.gov.au/learn/learning-resources/learning-resource-themes/environment-and-nature/plants/impact-colonial-settlement-environment) * [Australian agricultural and rural life](https://www.sl.nsw.gov.au/stories/australian-agricultural-and-rural-life/life-land) |

#### Australians at war: World Wars I and II (1914–1918, 1939–1945)

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| Syllabus content | Teaching and learning activity ideas | Resources |
| **The scope and nature of warfare**  Students outline and sequence the changing scope and nature of warfare from trenches in World War I to the Holocaust and the use of the atomic bombs to end World War II | Long term environmental impact of trench warfare in Europe in WWI.  The legacy of nuclear weapons and their impact on the environment. | * Teacher resource – [The environmental footprint of war](https://www.jstor.org/stable/20723680?seq=1) * [Environmental effects of warfare](https://www.lenntech.com/environmental-effects-war.htm) |

#### Popular culture (1945–present)

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| Syllabus content | Teaching and learning activity ideas | Resources |
| Continuity and change in beliefs and values that have influenced the Australian way of life  Students outline and assess the impact of Americanisation and global events on Australian society over time | Investigate and create an annotated timeline showing the evolution of the environmental movement in Australia, particularly in relation to events such as:   * the fuel shocks of the 1970s * Ozone layer hole and the banning of CFCs * Exxon Valdez disaster * Chernobyl disaster * Ok Tedi disaster * Brundtland commission 1987 – Our Common Future   Examine the influence of American TV and film on patterns of consumption in Australia.  Examine the history of McDonald’s in Australia and the impact it has had on fast food in Australia. Discuss links between fast food and sustainability. | * [The Oil Shocks of the 1970s](https://energyhistory.yale.edu/module/oil-shocks-1970s) * [The 1970’s Energy Crisis](https://cr.middlebury.edu/es/altenergylife/70's.htm) * [Arctic ozone hole](https://earthobservatory.nasa.gov/world-of-change/Ozone) * [Report of the World Commission on Environment and Development: Our Common Future](http://www.un-documents.net/wced-ocf.htm) * [Macca’s Story - Where we’ve come from](https://mcdonalds.com.au/about-maccas/maccas-story) |

#### The environment movement (1960s–present)

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| Syllabus content | Teaching and learning activity ideas | Resources |
| The background to environmental awareness, including the nineteenth century National Parks movement in America and Australia  Students:   * identify major threats to the natural environment * outline the origins of environmental awareness and activism * briefly describe the purpose of the nineteenth-century National Parks movement in America and Australia | Create a poster or infographic highlighting major threats to the natural environment around the world.  Create an annotated timeline of the origins of environmental awareness and activism.  Write a brief report describing the purpose and history of national parks in Australia and the USA. | * [How the largest environmental movement in history was born](https://www.bbc.com/future/article/20200420-earth-day-2020-how-an-environmental-movement-was-born) * [First national park](https://www.nma.gov.au/defining-moments/resources/first-national-park) * [History of the National Reserve Scheme](https://www.environment.gov.au/land/nrs/about-nrs/history) * [U.S. National Parks—In the Beginning](https://www.nationalgeographic.com/travel/national-parks/early-history/) * [Brief History of the National Parks](https://www.loc.gov/collections/national-parks-maps/articles-and-essays/brief-history-of-the-national-parks/) |
| The intensification of environmental effects in the twentieth century as a result of population increase, urbanisation, increasing industrial production and trade  Students use a range of sources to explain how the growth of cities, population and industries have affected the environment in Australia and the world | Access data and graphs (for the last two hundred years (approximately) that show changes to:   * global population * number of megacities * consumption of resources such as coal, oil, and iron ore * CO2 emissions * rates of deforestation * species extinction * global temperature averages * frequency of atmospheric events (cyclones, droughts etc)   As a class, discuss any linkages between the data sets. | * [Our world in data](https://ourworldindata.org/) * [Urbanisation and the rise of the Megacity](https://www.youtube.com/watch?v=JDS_BqDeZ4k) (duration 1:05) * [The state of the world’s forests](http://www.fao.org/state-of-forests/en/) * [We’re gobbling up the Earth’s resources at an unsustainable rate](https://www.unenvironment.org/news-and-stories/story/were-gobbling-earths-resources-unsustainable-rate) * [Iron ore - Statistics & Facts](https://www.statista.com/topics/1919/iron-ore/) |
| Students discuss how global resource needs and trade have intensified environmental issues in developed and developing nations | Create a map identifying the key sites of production and consumption of global natural resources such as oil.  Identify significant shipping routes.  Suggest possible environmental impacts related to this trade.  Conduct a case study of oil exploration and extraction in the Niger River delta for example:   * Environmental damage * Responses of governments and non-government organisations to the issues arising from oil exploration and extraction in the Niger River delta. | * [This is an incredible visualization of the world's shipping routes](https://www.vox.com/2016/4/25/11503152/shipping-routes-map) * [Oil Pollution in the Niger Delta](http://large.stanford.edu/courses/2017/ph240/nwagbo1/) * [The Niger delta is one of the most polluted places on earth](https://www.amnesty.org/en/latest/news/2018/03/niger-delta-oil-spills-decoders/) * ['This place used to be green': the brutal impact of oil in the Niger Delta](https://www.theguardian.com/global-development/2019/dec/06/this-place-used-to-be-green-the-brutal-impact-of-oil-in-the-niger-delta) |
| Students describe the response to key environmental issues in Australian agriculture, for example the back-to-the-land movement, organic farming, and permaculture | Research and create a publicity campaign to educate farmers about alternatives to traditional western farming methods in response to environmental issues for example:   * organic produce * Farmers for Climate action group * permaculture | * [Farmers for climate action](https://farmersforclimateaction.org.au/) * [Anika Molesworth](https://www.anikamolesworth.com/) * [Permaculture Australia](https://permacultureaustralia.org.au/) |
| The growth and influence of the environment movement within Australia and overseas, and developments in ideas about the environment (notion of 'Gaia', 'limits to growth', sustainability, 'rights of nature')  Students discuss key events in the growing awareness of environmental issues in Australia and the world before 1975 | Investigate the flooding of Lake Pedder in 1971 and its role in establishing the modern Australian Greens movement.  Explore the events and issues surrounding French and American nuclear testing in Polynesia, for example:   * Mururoa Atoll * Bikini Atoll | * [Lake Pedder’s future](https://education.abc.net.au/home#!/media/28755/lake-pedder-s-future) (duration 1.14) * [Fighting for lake Pedder](https://education.abc.net.au/home#!/media/28737/fighting-for-lake-pedder) (duration 1.55) * [French nuclear tests 'showered vast area of Polynesia with radioactivity](https://www.theguardian.com/world/2013/jul/03/french-nuclear-tests-polynesia-declassified)' * [Nuclear Testing in the Pacific 1950s-80s](http://www.livingpeacemuseum.org.au/omeka/exhibits/show/nuclear-weapons-in-aus-pacific/nuclear-testing-pacific) |
| Students outline the origins and policies of green political parties in the 1980s  describe the influence of at least one of the following environmental ideas:   * 'Gaia' * limits to growth * sustainability * rights of nature | Write a brief summary of the Australian and global greens movements:   * origins * objectives * policies.   Choose one of the following environmental concepts and research and describe the concept:   * 'Gaia' * limits to growth * sustainability * rights of nature | * [The rise of the Australian Greens](https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp0809/09rp08) * [The Greens – Our story](https://greens.org.au/about/our-story) * [Global Greens – Who we are](https://www.globalgreens.org/who-we-are) * [Gaia: everything on Earth is connected](https://www.greenpeace.org/international/story/24978/gaia-ecology-earth-is-connected-rex-weyler/) * [Looking Back on the Limits of Growth](https://www.smithsonianmag.com/science-nature/looking-back-on-the-limits-of-growth-125269840/) * [There's a growing push to give nature legal rights, but what would that mean?](https://www.abc.net.au/news/science/2019-03-16/rights-of-nature-science/10899778) |
| Significant events and campaigns that contributed to popular awareness of environmental issues, such as the campaign to prevent the damming of Australia's Gordon River, the nuclear accident at Chernobyl and the Jabiluka mine controversy in 1998  Students outline the important developments in at least one environmental event and campaign | Identify and explore one significant Australian or global environmental campaign for example:   * Chernobyl nuclear disaster * Exxon Vadez * ozone layer hole campaign * Jabiluka mine controversy * Student climate strikes * Bombing of the Rainbow Warrior | * [The Chernobyl disaster: What happened, and the long-term impacts](https://www.nationalgeographic.com/culture/topics/reference/chernobyl-disaster/) * [Exxon Valdez changed the oil industry forever—but new threats emerge](https://www.nationalgeographic.com/environment/2019/03/oil-spills-30-years-after-exxon-valdez/) * [NASA Study: First Direct Proof of Ozone Hole Recovery Due to Chemicals Ban](https://www.nasa.gov/feature/goddard/2018/nasa-study-first-direct-proof-of-ozone-hole-recovery-due-to-chemicals-ban) * [Ozone depletion explained](https://www.nationalgeographic.com/environment/global-warming/ozone-depletion/) * [Environmental Justice Case Study: The Jabiluka Mine and Aboriginal Land Rights in Australia's Northern Territory](http://umich.edu/~snre492/Jabiluka.html) * [Uranium Mining - Uranium mining has long caused controversy in the Kakadu region](https://www.mirarr.net/uranium-mining) * [School strike 4 Climate Australia](https://www.schoolstrike4climate.com/) * [Global school strike for climate change movement resumes, with protests taking place across Australia](https://www.abc.net.au/news/2020-09-25/global-student-strike-for-climate-action/12702434) * [The bombing of the Rainbow Warrior](https://www.greenpeace.org/new-zealand/about/our-history/bombing-of-the-rainbow-warrior/) |
| Responses of governments, including the Australian government, and international organisations to environmental threats since the 1960s, including deforestation and climate change  Students:   * assess changing Australian government policies and actions towards environmental issues since the 1960s, including deforestation and climate change * discuss one Australian government achievement in response to an environmental threat since the 1960s * examine the role of international governments and organisations in dealing with at least one environmental threat | Examine and assess the effectiveness of some of the following in protecting the environment:   * Convention Concerning the Protection of the World Cultural and Natural Heritage (1974) * Montreal Protocol 1987 * Kyoto Protocol 1997 * Environment Protection and Biodiversity Conservation Act 1999   Create a report on the Australian government’s response to the Franklin river campaign and the outcome of the campaign.  Explore the origins, intent, and outcome of the Paris agreement 2015. Through research, assess if the agreement is successful in achieving its goals. | * [History of The Commonwealth's Environmental Role](https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Environment_and_Communications/Completed_inquiries/1999-02/bio/report/c02) * [The World Heritage Convention](https://www.environment.gov.au/heritage/about/world/world-heritage-convention) * [Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)](https://www.environment.gov.au/epbc) * [Franklin Dam and the Greens](https://www.nma.gov.au/defining-moments/resources/franklin-dam-and-the-greens) * [Franklin River Campaign](https://education.abc.net.au/home#!/media/521221/franklin-river-campaign) (duration 6.58) * [The Paris Agreement](https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement) |

### Stage 4 history lesson guide

**Teacher note – below are some** suggested lesson ideas which have been designed to be adjusted for your school’s specific context. Outcomes and syllabus content are included as a guide, but students may not meet the entirety of the included outcome or content points through these tasks and may need further support.

#### Sustainability – Investigating the ancient past

##### Outcome

HT4-6 uses evidence from sources to support historical narratives and explanations

##### Inquiry question

How do we know about the ancient past?

##### Selected syllabus content

The nature of the sources for ancient Australia and what they reveal about Australia’s past in the ancient period, such as the use of resources

Students:

* locate and describe a variety of sources for ancient Australia, e.g. animal and human remains, tools, middens, art and stories and sites related to the Dreaming
* investigate what these sources reveal about Australia’s ancient past

##### Learning intention

To gain an understanding of the lives and practices of Aboriginal and Torres Strait Islanders prior to the 18th century.

##### Guiding inquiry questions

* Identify and examine a range sources that provide evidence relating Aboriginal and Torres Strait Islander agriculture prior to the 18th century.
* What was the extent and nature of Aboriginal agriculture prior to the 18th century?

### Stage 5 history lesson guide

**Teacher note – below are some** suggested lesson ideas which have been designed to be adjusted for your school’s specific context. Outcomes and syllabus content are included as a guide, but students may not meet the entirety of the included outcome or content points through these tasks and may need further support.

#### Sustainability - the environmental movement

##### Outcome

HT5-4 explains and analyses the causes and effects of events and developments in the modern world and Australia

##### Selected syllabus content

**The scope and nature of warfare**

Students outline and sequence the changing scope and nature of warfare from trenches in World War I to the Holocaust and the use of the atomic bombs to end World War II

##### Learning intention

To examine the long-term environmental impacts of trench warfare in the region of the Western front of WWI.

##### Guiding inquiry questions

* Use the [historical inquiry process](https://education.nsw.gov.au/teaching-and-learning/curriculum/key-learning-areas/hsie/s4-5/history/programming) to research and discuss long term environmental impacts and associated issues arising from conflict in the region of the Western Front of WWI. Issues to consider may include:
  + landscape changes
  + dangers of unexploded munitions
  + soil structure changes
  + toxic residues from chemicals of war.