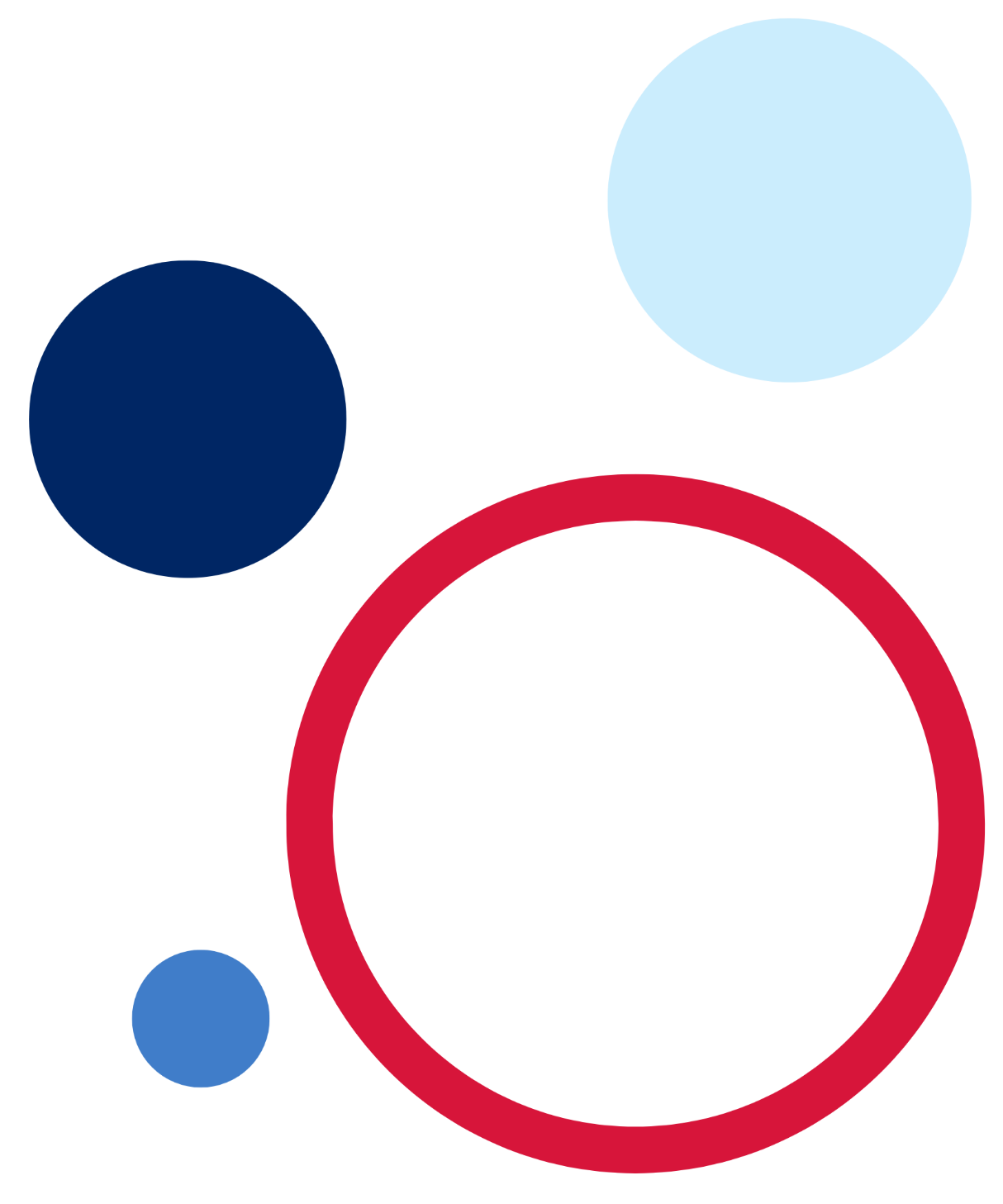
# Geography 11–12 – People, patterns and processes learning sequence



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This resource has been developed to assist teachers in NSW Department of Education schools to create learning that is contextualised to their classroom. It can be used as a basis for the teacher’s own program, assessment, or scope and sequence, or be used as an example of how the new curriculum could be implemented. The resource has suggested timeframes that may need to be adjusted by the teacher to meet the needs of their students.

## Content focus

**Students investigate evidence of human diversity across the Earth’s surface. They examine the spatial patterns and extent of the human footprint, and the human transformations shaping those patterns. Students investigate the unique character of places and how various human processes are shaping them.**

**Duration:** this sequence of learning is designed to be completed in 40 indicative hours.

## Outcomes

A student:

* **GE-11-01** examines places, environments and natural and human phenomena, for their characteristics, spatial patterns, interactions and changes over time
* **GE-11-02** explains geographical processes and influences, at a range of scales, that form and transform places and environments
* **GE-11-03** explains geographical opportunities and challenges, and varying perspectives and responses
* **GE-11-04** assesses responses and management strategies, at a range of scales, for sustainability
* **GE-11-05** analyses and synthesises relevant geographical information from a variety of sources
* **GE-11-06** identifies geographical methods used in geographical inquiry and their relevance in the contemporary world
* **GE-11-07** applies geographical inquiry skills and tools, including spatial technologies, fieldwork, and ethical practices, to investigate places and environments
* **GE-11-08** applies mathematical ideas and techniques to analyse geographical data
* **GE-11-09** communicates and applies geographical understanding, using geographical knowledge, concepts, terms and tools, in appropriate forms

Related Life Skills outcomes: **GE-LS-01, GE-LS-02, GE-LS-03, GE-LS-04, GE-LS-08, GE-LS-9, GE-LS-10, GE-LS-11, GE-LS-12**

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## Learning sequence 1: Overview of the uniqueness and diversity of human activity

**Teacher note:** examples included in the syllabus are provided to support delivery of course content. These examples are not mandatory and teachers may choose to use the examples provided or select appropriate alternatives.

This focus area includes an overview of the diversity and extent of human activity. It is intended to provide a broad perspective as a context for studying the focus area.

Allocate a maximum of **4 hours** to this part of the focus area.

### Syllabus content

* The diversity and extent of human activity on the Earth’s surface on a global scale, including spatial patterns of settlement, infrastructure, and agricultural and industrial production
* Spatial patterns related to culture
* The increasingly integrated nature of the world, including:
* economic activities and cultures
* the effect of technological change on interconnections between places in relation to distance and time
* the role of transnational corporations (TNCs), world cities, migration and tourism in international integration.

#### Learning intentions and success criteria

**Teacher note:** these learning intentions and success criteria are general and should be contextualised to suit your school and students’ needs.

**Learning intentions**

Students:

* understand the spatial patterns of human activity and how they relate to geographical factors and resources
* investigate the spatial distribution of culture, with a focus on Indigenous Australian cultures, and explore the impact of the environment and natural features on this distribution
* examine the increasing global integration of economies and cultures, and explore the roles of technology, TNCs, world cities, migration, and tourism in this process.

**Success criteria**

Students can:

* identify and analyse the spatial patterns of specific human activities on choropleth maps
* explain the factors influencing the spatial distribution and extent of human activities
* identify unique cultural traditions, languages, and other aspects of Indigenous Australian cultures in different regions of the country
* explain how thematic maps differ from topographic or political maps
* identify and explain the reasons behind the increasing integration of economies and cultures across the world
* research and map the global presence and impact of a specific TNC, focusing on its influence on international integration.

### Overview of the uniqueness and diversity of the earth

**Teacher note**: the overview of the diversity and extent of human activity should cover a maximum of **4 hours** of teaching time. This section is intended to provide students with a broad overview of the focus area.

Brainstorm the spatial patterns of human activity using geographical terminology. This terminology may include:

* linear patterns
* sparse patterns
* dense patterns
* nucleated patterns
* peripheral patterns
* cluster patterns.

Create flashcards for key geographical terminology and add to terminology and flashcards throughout the focus area.

In small groups, explore the spatial patterns of human activity shown on choropleth maps. Each group examines ONE of the following human activities:

* settlement
* infrastructure
* agricultural activity
* industrial production.

In reference to the human activity selected, use a suitable map. Annotate the map with key observations of the following:

* the extent of the activity
* proximity of the activity to natural resources and other human activities
* the spatial distribution of the activity, for example linear, sparse, dense, nucleated, peripheral, or cluster patterns.

Resources to support the activity include:

* Human settlement – [Urban centre database](https://ghsl.jrc.ec.europa.eu/ucdb2018visual.php), [Population density 2022](https://ourworldindata.org/grapher/population-density)
* Infrastructure – [Global infrastructure map](https://maps.worldbank.org/toolkit)
* Industrial activity – [Resource Watch](https://resourcewatch.org/data/explore?section=Discover&selectedCollection=&zoom=3&lat=0&lng=0&pitch=0&bearing=0&basemap=dark&labels=light&aoi=&page=1&sort=most-viewed&sortDirection=-1) (location of power plants found in the ‘energy’ tab); [Industry as a share of total GDP (%)](https://howmuch.net/articles/role-industry-around-the-world)
* Agriculture – [6 Amazing Global Agriculture Maps](https://gisgeography.com/agriculture-maps-global-farming/), [Resource Watch](https://resourcewatch.org/data/explore?section=Discover&selectedCollection=&zoom=3&lat=0&lng=0&pitch=0&bearing=0&basemap=dark&labels=light&aoi=&page=1&sort=most-viewed&sortDirection=-1)

Table 1 – resources to support the activity

|  |  |
| --- | --- |
| Human activity | Resources |
| Human settlement | * [Urban centre database](https://ghsl.jrc.ec.europa.eu/ucdb2018visual.php) * [Population density, 2022](https://ourworldindata.org/grapher/population-density) |
| Infrastructure | * [Global infrastructure map](https://maps.worldbank.org/toolkit) |
| Industrial activity | * [Resource Watch](https://resourcewatch.org/data/explore?section=Discover&selectedCollection=&zoom=3&lat=0&lng=0&pitch=0&bearing=0&basemap=dark&labels=light&aoi=&page=1&sort=most-viewed&sortDirection=-1) (location of power plants found in the ‘energy’ tab) * [Industry as a share of total GDP (%)](https://howmuch.net/articles/role-industry-around-the-world) |
| Agriculture | * [6 Amazing Global Agriculture Maps](https://gisgeography.com/agriculture-maps-global-farming/) * [Resource Watch](https://resourcewatch.org/data/explore?section=Discover&selectedCollection=&zoom=3&lat=0&lng=0&pitch=0&bearing=0&basemap=dark&labels=light&aoi=&page=1&sort=most-viewed&sortDirection=-1) |

Share the annotated maps in a gallery walk. View and use the maps to make notes to respond to the following questions:

* What factors influence the spatial distribution and extent of human activities?
* What are some examples of human activities that can vary in their spatial patterns?
* How do different human activities interact and affect each other?
* How do natural resources, transportation networks, and government policies affect human settlement and development?
* What factors influence where people live, build infrastructure or undertake agricultural or industrial activity?
* What are some examples of the complex patterns of human settlement and development that can arise from the interaction of different factors.

Using a [Think-Pair-Share](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/645#.YwV0eskw1Wo.link) strategy, the [Map of Aboriginal Australia](https://www.researchgate.net/figure/Map-of-Aboriginal-Australia-demonstrating-the-multitude-of-Aboriginal-and-Torres-Strait_fig2_281774474), the [Gambay – first languages map](https://gambay.com.au/) and further research, complete the following questions in small groups:

* What is the significance of the map of Aboriginal Australia?
* How does this map illustrate the diversity of Aboriginal and Torres Strait Islander languages?
* Select 2 different regions shown on the map and identify examples of the unique cultural traditions found in each.
* What is the distribution of languages spoken in relation to water bodies in Australia?
* How do thematic maps differ from topographic or political maps?
* How can this map be useful for researchers and policymakers in Australia?
* What are some limitations of the Map of Aboriginal Australia in representing the diversity and complexity of Aboriginal and Torres Strait Islander cultures?

Engage in a class discussion about the spatial distribution of culture. Use a political map of Australia along with the other resources to reflect on how the environment and natural features can impact this distribution.

Provide an explanation for how the environment and/or natural features influence the spatial distribution of culture.

In small groups, examine one aspect of Indigenous Australian culture (for example, language, art, customs, spirituality). Use maps and a range of media articles and film clips to further develop understanding of the aspect of culture selected. Analyse and identify spatial patterns in the research (for example, areas with a high concentration of Indigenous languages, regions where specific art styles are prevalent). Create a visual representation of the findings.

Resources to support this activity may include [More Australian tourists seek out authentic Aboriginal cultural experiences](https://www.abc.net.au/news/2021-07-04/aboriginal-cultural-tourism-is-booming-in-wa/100231714) and [Indigenous heritage tourism and its economic value in Australia](https://www.nintione.com.au/resources/rao/indigenous-heritage-tourism-and-its-economic-value-in-australia/).

**Teacher note:** prior to commencing this activity, students should be introduced to key terms including: integration, economics, technology; Transnational Corporations (TNCs); world cities; migration; and tourism.

Complete a brainstorming activity, using the following question as a prompt: ‘What do you think makes our world increasingly integrated?’

In small groups, prepare an overview of global integration, titled, ‘When one country sneezes, the world catches a cold.’ This overview may presented in a mode preferred by the group, for example, a [Canva](https://t4l.schools.nsw.gov.au/resources/professional-learning-resources/canva-for-education.html) poster, [concept map](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/577#.YwV7FE4tCHY.link), short speech or video. Use class resources and websites, including [What is Globalisation? (2:07)](https://youtu.be/ZNejKHKSbl0), [Econosights: Impacts to Australia from Chinese trade restrictions](https://www.ampcapital.com/au/en/insights-hub/articles/2022/january/econosights-impacts-to-australia-from-chinese-trade-restriction) and [When China Sneezes, Asia Catches a Cold](https://cris.unu.edu/when-china-sneezes-asia-catches-cold).

The overview should address the following questions:

* What are some reasons behind the increasing integration of economies and cultures across the world?
* How do technology, TNCs, world cities, migration, and tourism contribute to the acceleration of economic and cultural integration?
* What is the effect of technological change on interconnections between places in relation to distance and time?

In groups of 4–5, select a specific Transnational Corporations (TNC) (for example: Apple, Coca-Cola, Tesla, Nestle).

Research and map the selected TNC, each group should focus on one of the following aspects:

1. Company profile (headquarters, industries, products or services)
2. Global presence (number of countries, international partnerships)
3. Impact on international integration (job creation, economic growth, cultural influence)

Present the research findings to the class. Provided are some guiding questions for the presentation:

* How does the TNC interact with local economies and communities in the countries where it operates? Consider factors such as employment practices, sourcing of raw materials, and contributions to local infrastructure.
* What role does the TNC play in technological innovation and knowledge transfer between countries? Provide specific examples of innovative products, services, or collaborations that have resulted from the TNC's international presence.

Discuss the extent to which the TNC adapts its products or services to cater to local tastes and preferences, as well as how it incorporates local cultural elements into its global branding strategy.

## Learning sequence 2: Population and resource consumption

**Teacher note:** examples included in the syllabus are provided to support delivery of course content. These examples are not mandatory and teachers may choose to use the examples provided or select appropriate alternatives.

### Syllabus content

* The characteristics, growth and distribution of the world’s population, including trends, rates of change and density
* Influences that shape global population change, including:
* demographic transition
* population movements
* Challenges arising from population change – environmental, economic and social
* Population characteristics and trends in **TWO** countries, including:
* reasons for similarities and/or differences
* challenges and responses in each country
* varying perspectives on population management
* Links between population characteristics and natural resources, including:
* the global distribution and consumption of natural resources
* population size, distribution and concentration, and levels of resource consumption in various places
* challenges of resource consumption, including depletion of resources, impacts on Indigenous Peoples, environmental degradation, and inequalities in human wellbeing

#### Learning intentions and success criteria

**Teacher note:** these learning intentions and success criteria are general and should be contextualised to suit your school and students’ needs.

**Learning intentions**

Students:

* understand global population trends, density, distribution, and growth rates by analysing various resources and constructing a concept map
* interpret and analyse population pyramids, and understand the significance of these pyramids in predicting future demographic trends
* understand the Demographic Transition Model and its stages, as well as its impact on a country's population and economic standing
* investigate the influence of external factors, such as war and climate change, on population movements and global population change
* develop skills in interpreting and creating various types of thematic maps to better understand population dynamics and movements
* analyse and communicate the implications of population movements and global population change, considering various factors and limitations
* identify and differentiate between economic, environmental, and social challenges arising from population change in cities
* explore and evaluate different government responses to population challenges in India and Australia, including population growth and ageing populations
* analyse the impact of various population characteristics on the environment and sustainability
* develop their critical thinking skills by discussing and evaluating the relationship between population growth, resource consumption, and environmental sustainability
* understand the social and environmental consequences of resource extraction, particularly its effects on Indigenous Peoples and the environment.

**Success criteria**

Students can:

* explain the purpose of population pyramids and their importance in understanding population demographics, as well as accurately interpret different types of population pyramids
* calculate proportional changes between two population pyramids and identify patterns or trends that emerge from their calculations
* demonstrate understanding of global population trends by answering questions related to population pyramids, population density and distribution, and factors contributing to these trends
* accurately describe the key features, impacts, and examples of each stage of the Demographic Transition Model
* effectively research, analyse, and present information about population movements resulting from external factors such as war or climate change
* effectively communicate findings in presentations, responses, and discussions, considering the context and limitations of the data used
* demonstrate a comprehensive understanding of the complex relationships between environmental, political, and social factors and their impact on global population change
* identify and compare population characteristics and trends in Australia and India, including population density, growth rates, fertility rates, and population pyramids
* analyse different government responses to population challenges, evaluating their advantages and disadvantages, and ranking their effectiveness
* effectively communicate findings and analyses through various modes of presentation, such as written responses, flow charts, concept maps, or multimedia presentations
* identify 3 big ideas about the relationship between population characteristics and the environment or sustainability, using the provided resource
* critically evaluate the reliability, validity, currency, and bias of provided sources
* write a well-structured extended response, addressing the guiding questions and demonstrating a comprehensive understanding of the link between population characteristics and challenges of natural resources.

### Characteristics growth and distribution of the world’s population

Construct a [concept map](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/577#.Yt34FQLlbjs.link) highlighting the key features of the global population, using the following resources:

* [Current World Population](https://www.worldometers.info/world-population/#:~:text=World%20Population%20Clock%3A%207.96%20Billion%20People%20(2022)%20%2D%20Worldometer)
* [Distribution of the global population 2022, by continent](https://www.statista.com/statistics/237584/distribution-of-the-world-population-by-continent/)
* [World population density map](https://commons.wikimedia.org/wiki/File:World_population_density_map.PNG)
* [Twenty countries with the largest population in mid 2022](https://www.statista.com/statistics/262879/countries-with-the-largest-population/).

The features should include the following:

* the current world population
* current growth trends
* variations in world population density and distribution of the world population
* countries or continents with the highest population growth rates in the world
* countries or continents with declining growth.

Explore the concept of population profiles (or pyramids) and their importance in understanding population demographics.

Review [Population pyramids: Powerful predictors of the future - Kim Preshoff (5:01)](https://www.youtube.com/watch?v=RLmKfXwWQtE) and [Population profiles (2:17)](https://education.nsw.gov.au/teaching-and-learning/curriculum/hsie/hsie-curriculum-resources-k-12/hsie-11-12-curriculum-resources/population-profiles) to understand the different types of population profiles and how to interpret them.

Discuss the concept of proportional change and use examples to calculate it.

In small groups, interpret a sample population pyramid. Identify the age groups that make up the largest percentage of the population and make predictions based on the findings.

Groups present the findings to the class and discuss the different predictions made by each group.

Examine 2 population profiles from the same location, 20 years apart and calculate the proportional change between them. Identify any patterns or trends that emerge from the calculations.

Access the population pyramids and complete the following questions:

* How are age groups typically divided in a population pyramid?
* What do the horizontal bars in a population pyramid represent?
* What is the difference between an expansive, stationary, and constrictive population pyramid?
* How can population pyramids be used to predict future demographic trends?

Use [World Population Prospects 2022, population pyramids](https://population.un.org/wpp/Graphs/DemographicProfiles/Pyramid/900) to predict changes in the pyramid between 2022 and 2100. Complete the following tasks:

* Define a population pyramid and explain its purpose in representing the age and sex structure of a population.
* Describe the current growth trends in global population. What factors are contributing to these trends, and how do they vary across different regions?
* Interpret the variations in world population density and distribution, including identifying the regions with the highest and lowest population densities, and discuss the factors that contribute to these differences.
* Identify the countries or continents with declining growth rates.
* Discuss the role of migration in shaping the world's population density and distribution. How do migration patterns contribute to countries or continents with the highest or declining population growth rates?

Use [World Population Prospects 2022, population pyramids](https://population.un.org/wpp/Graphs/DemographicProfiles/Pyramid/900) to complete the following table.

Table 2 – population trends

|  |  |  |  |
| --- | --- | --- | --- |
| Population feature | P – patterns that you see | Q – quantify what you see with specific statistics and details | E – exceptions to the pattern |
| Total population |  |  |  |
| Change in different age groups |  |  |  |
| Annual rate of population change |  |  |  |
| Total fertility |  |  |  |
| Life expectancy |  |  |  |

Use the following prompts to generate discussion of the trends identified:

* Identify possible factors that contributed to the fall in global life expectancy at birth in 2021.
* What is the relationship between fertility rates and economic development? How are fertility rates linked to annual population growth rates?
* How do cultural and social factors affect fertility rates in different regions?
* What are the challenges and opportunities presented by an aging population? What are the potential consequences of an imbalanced age distribution in society?
* How will the numbers of young people in 2025 affect population growth in future?

### Influences that shape global population change

**Teacher note:** population movement as a result of the conflict in the Ukraine has been used as an example in this learning sequence. Discussions should remain limited to the data and population movement as relevant to the content and teachers should review the [Controversial Issues in Schools policy](https://education.nsw.gov.au/policy-library/policies/pd-2002-0045) and associated documents prior to teaching this content. Please consider the local school context and students needs to determine if an alternative example may be more appropriate to your setting.

Access [What is the Demographic Transition Model?](https://populationeducation.org/what-demographic-transition-model/) Divide into 5 groups. Each group examines one of the 5 stages in the model. Each group will prepare a brief presentation for the class that explains:

* key features of the stage
* impact of the birth and death rates on the country’s population in this stage
* an example of a population pyramid for this stage
* economic consequences of the population pyramid at this stage
* examples of countries in this stage.

Use a [writing scaffold](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/625?clearCache=1c55500a-2a84-7f71-800b-aefa7845fe83) to construct a response that explains the ways demographic transition influence a country's population and economic standing? The guiding questions provided will support a response:

* How does the Demographic Transition Model explain changes in population growth and development over time?
* What are some criticisms or limitations of the Demographic Transition Model?
* Can the Demographic Transition Model be used as a predictive tool for future population trends?
* Can the Demographic Transition Model be applied universally to all countries and regions?

Research the impact of the Ukraine war on population movements. Interpret proportional representation circles in [Refugees and asylum seekers from Ukraine](https://unhcr-web.github.io/refugee-statistics/0001-Vis-PoCs/Ukrainians.html) available on the [UN Operational data portal](https://data.unhcr.org/en/situations/ukraine).

Below is a guide to understand how to interpret proportional representation circles on maps:

Take a moment to understand the purpose of the map by identifying the subject matter or theme it aims to represent. This information is usually found in the title, legend, or accompanying text.

The legend is crucial for understanding how the circle sizes correspond to the data values. It will show you the scale of the circles and provide a reference for comparison. Make sure to carefully study the legend to ensure accurate interpretation of the data.

Determine the underlying geographic boundaries being used, such as countries, states, or counties. Understanding the base map will allow you to recognise the areas being compared.

The size of the circle is directly proportional to the data value it represents. Larger circles indicate higher values, while smaller circles signify lower values. Take note of the circles' sizes to gain a better understanding of the data distribution.

The legend should provide information about the scale used to determine the size of the circles. This can be a linear or logarithmic scale. A linear scale means that the circle size increases proportionally with the data value, while a logarithmic scale means that the circle size increases at a slower rate as the data value increases.

Look at the distribution of the circles across the map and identify any noticeable patterns or trends. This could include clusters of large or small circles, or an even distribution of sizes throughout the map.

To make meaningful comparisons between regions, look at the relative size of circles in different areas. This will help you understand the disparities between different locations and give you an idea of how the data is distributed.

When interpreting proportional representation circles on maps, it is essential to be aware of potential limitations and biases. The data may be outdated, incomplete, or subject to inaccuracies.

Develop an infographic that identifies the key facts about population movement from Ukraine into surrounding countries. These facts may include:

* The total number of people who have migrated from Ukraine due to the conflict
* The number of internally displaced persons (IDPs) in Ukraine, including the regions they come from and the areas where they have sought refuge
* The number of refugees who have fled Ukraine to neighbouring countries and beyond, including their destination countries and the main routes they have taken
* The demographic composition of the displaced population, including age, gender, ethnicity, and socioeconomic status
* The social and economic impact of population movements on host communities, including access to essential services such as healthcare, education, and housing.

Access the following resources and explain how climate change may lead to population movements across the world.

* [Climate change causes islands to disappear | 60 Minutes Australia (17:12)](https://youtu.be/N1cdCUZNh04)
* [Climate change and disaster displacement](https://www.unhcr.org/en-au/climate-change-and-disasters.html)

Use the following guiding questions to support responses:

* How does climate change contribute to forced displacement, as described by the UNHCR?
* What are some examples of disasters that can be exacerbated by climate change, leading to increased displacement of people?
* Explain the concept of ‘climate refugees’. What are the challenges they face?
* What is the role of the UNHCR in addressing climate change-related displacement and assisting affected populations?
* How do the effects of climate change disproportionately impact developing countries and their populations?

Using [Coastal Risk Australia](https://www.coastalrisk.com.au/home), [Elevations](https://www.ga.gov.au/scientific-topics/national-location-information/landforms/elevations) and [Introduction to maps (3:39)](https://education.nsw.gov.au/teaching-and-learning/curriculum/hsie/hsie-curriculum-resources-k-12/hsie-7-10-curriculum-resources/introduction-to-maps), to create a flowline map illustrating the possible movements of population in Australia as a result of sea level rise. The flowline map should show direction of movement and with thicker lines, indicate where greater numbers of people may be moving from and to.

A process to guide constructing flowline maps is included below:

1. Introduce the concept of flowline maps and their application in understanding population movements due to sea level rise.
2. Discuss the effects of sea level rise on coastal communities and brainstorm potential solutions.
3. Describe the types of data required for creating a flowline map related to sea level rise, such as elevation, population density, and infrastructure data.
4. Explain where to obtain the necessary data, including Australian government sources and GIS datasets.
5. Gather data on the characteristics of these points, such as population size, demographics, and infrastructure.
6. Obtain spatial data, such as geographic coordinates or administrative boundaries, to georeference your data.
7. Use reliable sources for data collection, such as government agencies, academic institutions, or reputable organisations.
8. Establish a method for connecting origin and destination points, such as drawing straight lines or following transportation routes.
9. Represent the magnitude of flow by adjusting line width, colour, or symbols. For example, thicker lines could indicate more significant population movements. Simplify or aggregate flowlines if needed to avoid clutter and improve map readability.
10. Choose a colour scheme that effectively communicates the magnitude of flow and contrasts with the background map.
11. Customise line styles, such as dashed or dotted lines, to differentiate between types of flows or to emphasise specific movements.
12. Create a legend that clearly explains the meaning of colours, line styles, and symbols used on the map. Include a scale bar and north arrow to provide geographic context and orientation.

Present the flowline map to the class and justify the choices made on the map.

Clearly communicate the purpose, findings, and limitations of the flowline map when presenting it to the class. At the end of the brief presentations, discuss and vote on the map that best represents what might be likely to happen.

Write a short response explaining how factors like environmental change or political unrest can shape global population change.

### Challenges arising from population change

Conduct a class discussion about economic, environmental, and social challenges in cities and ensure that students understand the distinction between the 3 terms. Utilise the steps below:

* Define each of the terms: economic, environmental, and social. Give examples of each and discuss how they are interconnected.
* Examine 2 contrasting cities, such as London (England) and Dhaka (Bangladesh), and identify the economic, environmental, and social challenges that may exist in each city. Examples of environmental, economic and social challenges arising from population change in London and Dhaka are provided in Table 3.

Table 3 – environmental, economic and social challenges

|  |  |  |  |
| --- | --- | --- | --- |
| Cities | Environmental challenges | Economic challenges | Social challenges |
| London | * Urban sprawl: as the population increases, demand for housing and infrastructure leads to the spread of the city, impacting green spaces and natural habitats. * Air quality: rising traffic and industrial activity contribute to increased air pollution, affecting public health. * Waste management: with a growing population comes an increase in waste production, posing challenges for efficient and sustainable waste management systems. * Energy consumption: a larger population requires more energy, leading to increased greenhouse gas emissions and pressure on energy infrastructure. | * Infrastructure: upgrading and expanding infrastructure (transportation, utilities, and public services) to accommodate a growing population can be costly and complex. * Unemployment: a larger population increases competition for jobs, potentially leading to higher unemployment rates. * Housing: rising demand for housing can lead to higher prices and shortages, making it difficult for people to find affordable homes. * Pressure on public services: increased demand for education, healthcare, and social services can strain resources and lead to reduced quality of services. | * Integration: managing the integration of diverse cultural and ethnic groups to create a cohesive and inclusive society. * Inequality: addressing socioeconomic disparities that can arise from increased population density and competition for resources. * Aging population: as the population ages, there are challenges in providing adequate healthcare, social support, and housing for the elderly. * Community engagement: ensuring that residents have opportunities to participate in and shape their communities, despite the rapid pace of change. |
| Dhaka | * Land use: the rapid growth of Dhaka has led to the conversion of agricultural land and wetlands into urban areas, reducing natural resources and increasing vulnerability to flooding. * Water pollution: high population density and industrial growth have led to water pollution, affecting the availability of clean water for consumption and irrigation. * Air quality: poor air quality due to increased traffic, industrial activity, and waste burning contributes to public health issues. * Climate change vulnerability: as a low-lying coastal city, Dhaka is at risk of sea-level rise and other climate-related disasters. | * Unemployment: the high population growth rate leads to increased competition for jobs, potentially exacerbating poverty and unemployment. * Informal economy: a large portion of the urban population is engaged in the informal economy, lacking access to social security and legal protections. * Infrastructure: The rapid population growth requires significant investment in infrastructure, including transportation, water supply, and waste management systems. * Slums and informal settlements: High demand for housing has led to the growth of informal settlements, often lacking basic amenities and infrastructure. | * Overcrowding: insufficient urban planning, resulting in the proliferation of informal settlements or slums * Inadequate access to education and healthcare: the growing population, perpetuating cycles of poverty and inequality * Rural migrants: challenges in integrating rural migrants into urban society, leading to social tensions and cultural clashes |

* In groups, view photos of the 2 cities and use the [peer discussion and conferencing](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/547?clearCache=8fefaf02-9f39-a480-18cd-e83e74fdc930) to answer the following questions:
* Which city would you prefer to live in and why?
* What economic challenges may exist in each of these cities?
* What environmental challenges may exist in each of these cities?
* What social challenges may exist in each of these cities?
* Consider how economic, environmental, and social factors interact and influence one another in each city?

[Brainstorm](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Browser?cache_id=a4c5b) possible solutions to these challenges using the [parking lot](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/570?clearCache=2efeb376-e824-fec-f2d8-ccc07450dfe1) method, and consider how these solutions may impact stakeholders.

Complete a [Jigsaw](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/546#.YuDC522CGFA.link) activity to research the challenges arising from world population change.

Using groups of 6, 2 students from each home group should be assigned to either environmental, economic or social challenges associated with population changes.

Research the challenge with expert groups assigned to the same challenge. Whilst one of the most significant population challenges is rapid growth, groups should consider a range of population changes, for example declining fertility or ageing populations.

Each challenge should be represented in a flow chart, an example is provided in Figure 1.

Figure 1 – example flow chart of challenges

A flow chart showing challenge of rapidly increasing population in 6 boxes:
A rapidly increasing population (environmental challenges)
increased need for housing
increased land clearing
reduced habitat
declining biodiversity
example of a location

On completion, return to home groups to educate team members about the assigned population challenge. Display the challenges around the room.

Use what has been learnt from the expert and home groups to prepare a written response to the following statement: ‘Explain how population changes can lead to social, environmental and economic challenges.’

### Population characteristics and trends

Review graphs and resources on the populations of Australia (Australia: [Choose your own statistics](https://games.abc.net.au/education/statistics-game/index.htm#/), [Census 2021 — Australia as 100 people](https://www.abc.net.au/news/2022-06-29/census-australia-as-100-people/101181614?fbclid=IwAR1llIcDk6bALCkW5MKlzPM8vBgm3SuqOlBr8mGtrEKZ32Rq2wP075Wk7sw) and [Population](https://www.abs.gov.au/statistics/people/population)) and India (India: [India Population](https://www.worldometers.info/world-population/india-population/#:~:text=India%20population%20is%20equivalent%20to,0%20people%20per%20mi2).&text=The%20median%20age%20in%20India%20is%2028.4%20years.)) to complete the following:

* identify characteristics and trends and summarise these into Table 4
* identify challenges that each country faces with population.

Table 4 – population characteristics and trends, Australian and India

|  |  |  |
| --- | --- | --- |
| Population characteristic | Australia – characteristics, trends and/or challenges | India – characteristics, trends and/or challenges |
| current population |  |  |
| population density |  |  |
| growth rate |  |  |
| fertility rate |  |  |
| shape of population pyramid |  |  |
| other |  |  |

Complete the following questions:

* What is the current population of Australia and India, and how do they compare to each other?
* How does the population density of Australia and India differ, and what factors contribute to these differences?
* What are the growth rates for both Australia and India, and how have these rates changed over the past few decades?
* How do the fertility rates in Australia and India compare, and what factors might contribute to these differences?
* Describe the shapes of the population pyramids for both countries. What do these shapes indicate about their respective populations?
* What are some other population characteristics that are important to consider when comparing Australia and India?
* What are the key trends in population characteristics for both Australia and India?
* What are some of the major challenges each country faces with their population, including issues related to resources, infrastructure, and quality of life?

Use the information in the table and the completed questions to consider the similarities and differences between the 2 countries. Collate the information into a [Venn diagram](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/599#.YucStZJPhGs.link).

Work in pairs to research measures taken by India to slow rapid population growth. Complete a [concept map](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/577#.YudKuVDIjRs.link) or summary that identifies at least 3 different responses to the issue and at least one advantage and disadvantage for each.

Rank the possible population management strategies from one to 3, with one being the most effective option and 3 the least.

Resources for this task:

* [Population Control Bill, 2019](https://en.wikipedia.org/wiki/Population_Control_Bill,_2019#:~:text=The%20Population%20Control%20Bill%2C%202019,the%20population%20growth%20of%20India.)
* [Why India Is Making Progress in Slowing Its Population Growth](https://e360.yale.edu/features/why-india-is-making-progress-in-slowing-its-population-growth)
* [India’s population policies, including female sterilisation, beset by problems](https://www.theguardian.com/world/2014/nov/13/india-population-growth-policy-problems-sterilisation-incentives-coercion)

Analyse the provided sources based on their reliability, validity, currency, and bias.

In 4 groups, examine the following perspectives on management of India’s growing population:

1. Government trying to improve economic outcomes for the population
2. Businesses reliant on young people to work in factories
3. An environmental party
4. Cultural groups that value large families.

Each group is to indicate where they would place their group on a continuum line marked at one end with: ‘The population should be controlled immediately by any means’; and at the other end with: ‘The control of population growth should never be allowed to interfere with human rights and choice.’

Each group should nominate a member to explain why their group is positioned in the nominated place.

Discuss the position on the continuum line where most perspectives are met. Reflect on individual opinions and how they may have changed or evolved throughout the activity.

Write a response to the following question: ‘Assess the response most likely to succeed in addressing the problem of rapid population growth in India.’

Using [You decide Australia’s population, we’ll show you how it looks](https://www.abc.net.au/news/2018-03-13/big-australia-or-small-australia-you-decide-our-population/9470156?nw=0&r=HtmlFragment), assess whether Australia should aim for a bigger and younger population or an older and smaller population. Share and explain responses in small groups.

Research the issue of Australia’s ageing population and one government response to this challenge. Create a presentation, for example a [storyboard](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/559#.YwaWekKpAN8.link), flow chart or written response, that covers the following:

* brief overview of the issue
* description of the impact of the issue on Australia
* explanation of one solution or response to the issue
* judgement on the effectiveness of the response to the issue.

Resources may include:

* [Child Care Subsidy](https://www.servicesaustralia.gov.au/child-care-subsidy)
* [Skilled migration program](https://immi.homeaffairs.gov.au/what-we-do/skilled-migration-program)
* [Profile of Australia’s population](https://www.aihw.gov.au/reports/australias-health/profile-of-australias-population).

Use a map of Australia and demographic data on the ageing population at a regional level to create a choropleth map illustrating the distribution of the ageing population across the country.

Identify patterns and trends, as well as any areas with particularly high or low concentrations of ageing residents.

**Fieldwork activity: Local study on ageing population (optional)**

Organise a field trip or virtual tour to a local community or neighbourhood with a significant ageing population. Instruct students to use geographical tools (for example, questionnaires, interviews, or observations) to collect data on the local ageing population and any government responses in the area. Students interpret the data collected and present their findings, comparing them to the national trends and government responses discussed in the previous activities. Provided is a guide to support fieldwork.

**Fieldwork activity guide: Local study on ageing population (optional)**

* Identify the research question: before beginning any fieldwork, it is essential to identify the research question that the students will be investigating. For example, the research question could be: ’What are the challenges faced by the ageing population in our local area, and how is the government responding to these challenges?’ Once the research question has been identified, it will be easier to determine what data needs to be collected and which geographical tools will be most useful.
* Select appropriate geographical tools: there are many different geographical tools that can be used to collect data on the ageing population and government responses in the area. Some examples include questionnaires, interviews, and observations. The choice of tool will depend on the research question, the nature of the data being collected, and the available resources. For example, if the research question is focused on the experiences of individual seniors, interviews might be the most appropriate tool. On the other hand, if the research question is focused on broader trends in the community, a questionnaire might be more appropriate.
* Determine the sample: once the research question and tools have been identified, the next step is to determine the sample. The sample is the group of individuals or locations that will be studied. For example, the sample might be seniors living in a specific neighbourhood or seniors who attend a particular community centre. The sample should be selected based on the research question and the availability of participants.
* Collect data: once the tools and sample have been determined, it's time to collect the data. This may involve administering questionnaires, conducting interviews, or making observations. Students should be trained on how to use the tools effectively and ethically, including obtaining informed consent and protecting the privacy of participants.
* Analyse and interpret data: After the data has been collected, students will need to analyse and interpret the data. This may involve statistical analysis or qualitative analysis, depending on the nature of the data and research question. Students should be taught how to analyse and interpret the data effectively and accurately.
* Applying geographical understanding: Once the data has been collected and analysed, students should be encouraged to apply their geographical understanding to the findings. This involves evaluating options in response to a geographical challenge, developing evaluation criteria based on environmental, social, and economic considerations, making an on-balance judgement about the most appropriate option(s), proposing actions and predicting outcomes, developing a plan to implement a proposal, and assessing how causes, impacts, opportunities, challenges, and responses relevant to one geographic context may be applicable to another. For example, students could use their findings to propose strategies to improve the well-being of the ageing population in the local area, such as the development of community centres or improved healthcare services.
* Communicate findings: Finally, students should be encouraged to communicate their findings to others. This may involve creating a report, presenting at a conference or community meeting, or using social media to share their results. Students should be encouraged to communicate their findings in a clear and concise manner and to consider the implications of their research for the local community and beyond.

Using geographical tools to collect data on the local ageing population and government responses in the area can be a valuable learning experience for students. It allows students to apply theoretical concepts to real-world situations, develop research skills, and engage with the challenges that local community are facing.

**Teacher note**: If fieldwork is not able to be accommodated at this point, consider organising a virtual fieldwork experience for students to explore a local community or neighbourhood with a significant ageing population. This could include:

* providing students with access to online resources, such as local government websites, reports, and news articles, that contain information about the ageing population in the selected community or neighbourhood.
* instructing students to analyse the online data and identify trends, challenges, and government responses in the area.
* encouraging students to use additional online mapping tools, such as Google Maps or Google Earth, to virtually explore the community and examine its physical characteristics and infrastructure.

If available, consider utilising a virtual reality (VR) headset or 360-degree video tour of the selected community or neighbourhood. Guide students through the virtual experience, highlighting key aspects of the ageing population and government responses in the area. After the virtual tour, have students discuss their observations and compare them to the national trends and government responses discussed in the previous activities.

#### Links between population characteristics and natural resources

Using [Conserving Earth](https://education.nationalgeographic.org/resource/conserving-earth) and further research complete the following activities:

* define natural resources
* distinguish between renewable and non-renewable resources
* identify and explain 3 examples of natural resources, including where they are sourced and how they are consumed by humans?

Access [Population and environment: a global challenge](https://www.science.org.au/curious/earth-environment/population-environment) and use this to research the impact of various population characteristics on the environment, including population size, population distribution, population composition, and population consumption.

Identify 3 big ideas about how the population characteristic links to the environment or sustainability and record this information into Table 5.

Table 5 – population characteristic and their impacts on the environment

|  |  |
| --- | --- |
| Population characteristic | Impact on the environment |
| population size |  |
| population distribution |  |
| population composition |  |
| population consumption |  |

In small groups use the summary and article [Population and environment: a global challenge](https://www.science.org.au/curious/earth-environment/population-environment) to complete the following tasks:

* Describe the main factors contributing to the global population growth and explain how they impact the environment.
* What is the connection between population growth and resource consumption, based on the information presented in the article. How can this relationship lead to environmental degradation?
* Describe how urbanisation and increased population density can lead to both positive and negative environmental outcomes.
* How can the demographic transition model can be applied to understand the relationship between population growth and environmental sustainability?
* What is the importance of sustainable development in addressing the challenges posed by population growth and the environment?

Construct an annotated [concept map](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/577#.Yujc7WolwQM.link) highlighting the key features of the solutions suggested in the article, that is, ‘a bigger pie’, ‘fewer forks’, and ‘better manners’.

Use the resources provided to write a report or create a visual representation of the link between an increasing world population’s demand for natural resources on people or the environment of either First Nations people in Australia or Pacific Island Nations. The resource should cover the following issues:

* identify the specific resources being extracted and their destinations
* discuss the stakeholders involved in resource utilisation and who benefits from the extraction process
* explain the social consequences of resource extraction, such as inequalities in human well-being
* examine the environmental impacts of resource extraction.

Resources to help complete the task may include:

* [Pacific Plunder](https://www.theguardian.com/world/ng-interactive/2021/may/31/pacific-plunder-this-is-who-profits-from-the-mass-extraction-of-the-regions-natural-resources-interactive?fbclid=IwAR0uoNxpnrMuWe2WV30N9YkWcpWP4Mrb1S1_3b8c0_e3utamzaUGoKNWRV8)
* [Rio Tinto accused of allowing irreplaceable Indigenous artefacts to be dumped in rubbish tip](https://www.theguardian.com/business/2021/jun/25/rio-tinto-accused-australian-indigenous-artefacts-dumped-rubbish)
* [Pilbara mining blast confirmed to have destroyed 46,000yo sites of 'staggering' significance](https://www.abc.net.au/news/2020-05-26/rio-tinto-blast-destroys-area-with-ancient-aboriginal-heritage/12286652).

Evaluate the reliability, validity, currency, and bias, of the sources provided.

Conduct an environmental impact assessment of a resource extraction project in a particular region, including:

* identifying potential environmental impacts and the impact on Indigenous Peoples
* considering the ways to mitigate the negative impacts and promote sustainable development.

Use geographical tools such as maps, diagrams, and charts to present the findings.

Write an extended response to the following question: ‘To what extent are population characteristics inextricably linked to challenges of natural resources.’ Use the guiding questions below to support the response:

* What are the main causes of resource depletion, and how do they affect the environment?
* How do resource consumption patterns impact the well-being of First Nations Peoples, and what can be done to address these impacts?
* What are some examples of environmental degradation caused by resource consumption, and what are the potential consequences for the planet?
* How can we balance the need for economic growth with the need to preserve natural resources and protect the environment?
* What are some strategies for reducing resource consumption and promoting sustainable development?

## Learning sequence 3: People, patterns and processes study

**Teacher note:** examples included in the syllabus are provided to support delivery of course content. These examples are not mandatory and teachers may choose to use the examples provided or select appropriate alternatives.

### Syllabus content

#### Study 4: Political power and contested spaces

#### Students investigate:

* The geopolitical characteristics of places from a global perspective, including nation-states and territories, political systems and ideologies, and power blocs
* Influences on political tension and conflict

**Examples:**

* Conflicting ideologies.
* State sovereignty.
* Regime change.
* Global media.
* Technological change.
* Pressure groups and organisations.
* Resource ownership and control.
* Migration.
* Impacts of, and responses to, political tension and conflict
* ONE contested space at a local or regional scale, including:
* spatial patterns and characteristics of the space
* the influence of economic, environmental, social, cultural and/or technological factors
* impacts of political tension and/or conflict on people, places and the environment, for example dispossession of land
* opportunities to enhance environmental sustainability and/or human wellbeing

#### Learning intentions and success criteria

**Teacher note:** these learning intentions and success criteria are general and should be contextualised to suit your school and students’ needs.

**Learning intentions**

Students:

* understand and define key terms related to nation-states, territories, and political systems, and explore the significance of these concepts in shaping the world
* analyse different types of geopolitical boundaries, state shapes, and political systems and ideologies, and evaluate their impact on nations and the global community
* develop critical thinking and collaborative skills through discussions, research, presentations, and extended writing on the topics of nation-states, territories, geopolitical boundaries, and power blocs.

**Success criteria**

Students can:

* accurately define and provide examples of key terms, such as nation, state, nation-state, nationalism, and sovereignty
* effectively collaborate in pairs or small groups to create concept maps, research case studies, and engage in discussions about nation-states and territories
* analyse and interpret different types of maps (political, physical, thematic) to identify geopolitical characteristics and patterns
* effectively use digital mapping tools, GIS software, and other resources to gather information on political systems, ideologies, and power blocs
* present their findings through posters or digital presentations, demonstrating their understanding of the key concepts, and engage in meaningful discussions with their peers.

### Study 4: Political power and contested spaces

**Teacher note**: teachers choose one of 5 options to develop an understanding of the role of people in changing places and environments, the processes involved, and various responses to change. The study selected must not significantly overlap or duplicate studies selected for Year 12. Study 4: Political power and contested spaces has been chosen for this teaching and learning program.

Content in Study 4: Political power and contested spaces, may be difficult for students who have lived experiences that relate to this focus area. Care should be taken when dealing with students with a trauma background. If this is a challenge for students in your setting, consider selecting an alternative study option. While syllabus content itself is not controversial, examples selected to support student learning should be appropriate and meet the requirements of the [Controversial Issues in Schools](https://education.nsw.gov.au/policy-library/policies/pd-2002-0045) policy.

### The geopolitical characteristics of places

Use [Cambridge Dictionary](https://dictionary.cambridge.org/) to create simple definitions for the following terms*:*

* nation
* state
* nation-state
* nationalism
* sovereignty.

Work individually or in pairs to create a [concept map](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/577?clearCache=30ebb60f-1bb3-9836-5b0d-739118616bff) for each term.

Access [Sovereignty Explained | World101 (4:40)](https://youtu.be/0EggqmMixig). Complete a class discussion about how sovereignty affects nation states and the global community. Prompts for the discussion may include:

* How has the concept of sovereignty shaped the world both domestically and internationally?
* What are some of the key responsibilities and limitations that come with sovereignty?
* How does sovereignty protect the rights of countries to govern and make their own decisions?

Access [What if the world was one country? A psychologist on why we need to think beyond borders](https://theconversation.com/what-if-the-world-was-one-country-a-psychologist-on-why-we-need-to-think-beyond-borders-152135). Use a [Think-Pair-Share](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/645#.YvlvTnjpb3o.link) strategy to identify the main ideas.

Conduct a [Think-Pair-Share](http://archive.wceruw.org/cl1/cl/doingcl/thinksq.htm) discussion with another pair, on whether all national borders should be removed. Provided are some guiding questions for the discussion:

* What are some of the benefits of thinking beyond national borders?
* In what ways can we promote a sense of global citizenship and interconnectedness among people from different parts of the world?
* What steps can individuals take to become more globally minded and contribute to creating a more connected and cooperative world?

Analyse different types of maps (political, physical, thematic) to identify nation-states, territories, and geopolitical characteristics of places. Use atlases, online map resources, and GIS software to make comparisons.

Select two different countries to research and compare. Consider factors such as political systems, territorial disputes, international relations, and natural resources.

Use online resources, textbooks, and academic articles to gather secondary information.

Research a case study to explore different types of geopolitical boundaries and the impact they have on people and the environment. The geopolitical boundaries could include:

* physical boundaries
* political boundaries
* buffer zones
* demilitarized zones
* cultural boundaries
* economic boundaries
* geometric boundaries.

Discuss the shape and boundaries of states, explaining each of the 6 types of state shapes using the key information on each geopolitical boundary provided below.

Geopolitical boundaries are the lines or physical boundaries that define and separate the territories of different countries or regions. There are several types of geopolitical boundaries, including:

* Physical boundaries: these are natural boundaries that are created by physical features such as mountains, rivers, and coastlines. They can be difficult to cross and can act as barriers to trade and movement.
* Political boundaries: these are boundaries that are created by human-made factors such as treaties, agreements, and laws. They can be changed through negotiations and political processes.
* Cultural boundaries: these are boundaries that are defined by differences in language, religion, or ethnicity. They can create cultural barriers between regions and countries.
* Economic boundaries: these are boundaries that are defined by differences in economic systems, such as capitalism or communism. They can create economic barriers between countries.
* Geometric boundaries: these are boundaries that are created by drawing lines on a map without regard to physical or cultural features. They are often used in colonial contexts and can lead to conflicts between different ethnic groups.
* Buffer zones: these are neutral areas that are established between two or more countries to prevent conflict. They can be created through international agreements or by military force.
* Demilitarized zones: these are areas where military activity is prohibited by international agreement. They are often created to reduce tensions between countries that are in conflict.

Types of shapes and boundaries of states

* Compact state: circular-like shape with relatively equal distances from the centre to any boundary. Examples include Kenya, Rwanda, Uganda, and Burundi.
* Elongated state: long and narrow shape; internal communication problems and isolation of towns from capital city. Example: Malawi.
* Prorupted state: compact state with an extended portion of boundary, often for access to a specific resource or to separate two other nations. Example: Namibia.
* Perforated state: has other state territories or states within them. Example: Lesotho, a sovereign state within South Africa.
* Fragmented state: separated by large bodies of water or other states. Examples include Indonesia and Michigan.
* Landlocked state: lacks direct access to major bodies of water, hindering its economy and trade; many African states became landlocked after gaining independence from European powers. Example: Austria.

Complete a [Frayer diagram](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/553?clearCache=505d152f-d40f-e6d6-7723-98c8c945eb68) about the significance of each shape and how they can impact a state's communication, military protection, access to resources, and other aspects.

Examine the topic of geopolitics and its importance in understanding the global political landscape. Discuss the main political systems and ideologies found around the world (for example, democracy, authoritarianism, communism, socialism, and capitalism).

Access a world map (physical and political) and the table of political systems and ideologies in Table 6. Use an atlas or digital mapping tools to research and colour-code countries based on their political systems and ideologies.

Table 6 – political ideologies

|  |  |
| --- | --- |
| Political ideology | Key ideas |
| **Anarchism**   * [What is Anarchism? (0:39)](https://youtu.be/25idDeLPlXw) * [Anarchism, definition and meaning](https://www.merriam-webster.com/dictionary/anarchism) * [What is anarchism all about?](https://theconversation.com/what-is-anarchism-all-about-50373) |  |
| **Liberalism**   * [Liberalism (international relations)](https://en.wikipedia.org/wiki/Liberalism_(international_relations)) * [An Introduction to Liberalism (6:24)](https://youtu.be/uNKj5lv983E) |  |
| **Conservatism**   * [What is Conservatism? (1:55)](https://youtu.be/Who9JLgfzdc) * [Conservatism](https://simple.wikipedia.org/wiki/Conservatism) |  |
| **Socialism**   * [Socialism](https://education.nationalgeographic.org/resource/socialism) * [What is Socialism? (1:31)](https://youtu.be/8KQQtbBYvDs) |  |
| **Capitalism**   * [What is Capitalism? (1:44)](https://youtu.be/azVxrMIxbJU) * [What Is Capitalism: Varieties, History, Pros & Cons, Socialism](https://www.investopedia.com/terms/c/capitalism.asp) |  |

Examples of key geopolitical characteristics that shape global politics:

* Location: a country's location can influence its strategic importance in the world, its access to resources and trade routes, and its potential for conflict with neighbouring states.
* Natural resources: countries with abundant natural resources, such as oil or minerals, often have significant geopolitical power and influence in the global economy.
* Military capabilities: a country's military strength can determine its ability to project power and defend its interests, as well as its potential for conflict with other states.
* Economic power: economic strength is a key driver of geopolitical power, as it can enable a country to exert influence over other states through trade, investment, and aid.
* Political stability: stable political systems are often viewed as more attractive for foreign investment and as reliable partners in international relations.
* Cultural and linguistic ties: shared cultural and linguistic ties can lead to closer relationships between countries, while differences in culture and language can create barriers to cooperation.
* Historical relationships: historical relationships between countries can shape current political dynamics and influence alliances and conflicts.
* Ideology: the ideological beliefs of a country's leaders and population can shape its foreign policy and alliances, as well as influence its relationships with other countries.

Identify patterns and trends in the distribution of political systems and ideologies.

In small groups, investigate a case study of a country with a political system or ideology that is different to Australia. Research the assigned country using the internet and other resources to gather information on its political system, ideology, and related geopolitical characteristics.

Create a poster or digital presentation summarising the findings, including a map showing the country's location, political boundaries, and relevant physical features.

Present the case study to the class, highlighting the key geopolitical characteristics and how they relate to the country's political system and ideology.

After each presentation, encourage a class discussion on the advantages and disadvantages of the state shapes and how they influence the state's internal and external affairs.

Define power blocs and identify examples, such as NATO, the European Union, and the Shanghai Cooperation Organisation.

Discuss the different factors that can lead to the formation of power blocs, including economic, political, and military alliances.

Discuss the importance of geographical tools and skills in understanding geopolitics and power blocs such as GIS, remote sensing, and spatial analysis. Explain how these tools can help analyse and visualise complex data sets and reveal patterns or trends in geopolitical relationships.

In groups, interpret the data sets and identify patterns or trends related to an assigned power bloc or geopolitical region.

**Teacher note:** access GIS software that provides students with a tutorial and user-friendly platform, such as [QGIS](https://www.qgis.org/en/site/forusers/download.html) ([beginner's tutorial on QGIS](https://www.qgistutorials.com/en/docs/3/getting_started_with_qgis.htm)) or web-based platform, such as [Google Earth](https://www.google.com/earth/versions/) or [ArcGIS Online](https://www.arcgis.com/index.html).

Access one geopolitical data set, such as:

* Country borders and alliances: [The CIA World Factbook](https://www.cia.gov/the-world-factbook/)
* Trade routes: [World Bank's World Integrated Trade Solution](https://wits.worldbank.org/)
* Natural resources: [United States Geological Survey's Mineral Resources Online Spatial Data](https://mrdata.usgs.gov/).

Import the data set into GIS software, to visualise the data on maps, and conduct a spatial analysis.

Think critically about the data being analysed and consider how the geographical distribution of resources, military installations, and trade routes can influence geopolitical relationships between countries.

Provided are additional resources to support activity:

* [What is NATO?](https://www.nato.int/nato-welcome/)
* [What is NATO and how is it changing?](https://www.bbc.com/news/world-europe-18023383)
* [European Union](https://www.investopedia.com/terms/e/europeanunion.asp)
* [Member states of the Arab league](https://www.worlddata.info/alliances/arab-league.php)
* [What is Asia-Pacific Economic Cooperation?](https://www.apec.org/about-us/about-apec)
* [Shanghai Cooperation Organisation](https://en.wikipedia.org/wiki/Shanghai_Cooperation_Organisation).

Write an extended response that explains how power blocs, political systems, and ideologies contribute to the transformation of the world's geopolitical characteristics.

### Influences on political tension and conflict

As a class, discuss the following:

* What are some of the main causes of conflict and tension in your local community?
* What are some of the major global conflicts that are currently causing tension and instability around the world?
* How have social media and the internet impacted the way people engage with conflict and tension on a local and global scale?
* How can individuals and communities work to reduce tensions and promote peace in their own areas?

Using local and regional newspaper or news website can help to identify key political tension and conflict currently occurring.

Complete the Conflict Resolution Simulation Scenario provided below.

**Objective:** the goal of this simulation is for students to develop an understanding of the complexities of political tensions and conflicts. Consider the importance of diplomacy, negotiation, and compromise in resolving such situations.

**Background:** the fictional island nation of Isla Harmonia is located in the middle of the Pacific Ocean. Isla Harmonia is comprised of two main ethnic groups, the Cobaltians and the Rubarians, who have a long history of coexistence on the island. However, recent events have led to a rise in tensions between the two groups.

**Recent events**: a valuable deposit of rare-earth minerals was discovered in the border region between the territories primarily inhabited by the Cobaltians and the Rubarians. The Harmonian government, dominated by the Cobaltian majority, decided to establish a mining operation in the area, benefiting primarily the Cobaltians. This has led to protests and violence from the Rubarians, who feel marginalised and excluded from the economic benefits of the mining operation.

**Situation:** tensions between the Cobaltians and the Rubarians have escalated rapidly, and the situation is now on the brink of turning into a full-scale conflict. There have been violent clashes between the two groups, and the situation has received international attention. The Harmonian government is under pressure to resolve the situation and maintain peace on the island.

**Groups:**

* Harmonian Government (Cobaltian majority)
* Cobaltian Community Leaders
* Rubarian Community Leaders
* International Mediation Team (neutral third party)
* Environmental Activist Group

**Task:** each group will discuss and research their assigned stakeholder's perspectives and interests related to the conflict. They will then participate in a negotiation process to develop a conflict resolution plan that addresses the concerns of all parties involved.

**Considerations:**

* How can the economic benefits of the mining operation be distributed more fairly between the Cobaltians and the Rubarians?
* What measures can be taken to ensure the long-term stability and peaceful coexistence between the 2 ethnic groups?
* How can the environmental impact of the mining operation be minimised, taking into account the concerns of the Environmental Activist Group?
* What role can the International Mediation Team play in facilitating the negotiation process and ensuring a fair and lasting resolution?

Use [A New Era of Conflict and Violence](https://www.un.org/en/un75/new-era-conflict-and-violence) to explore influences on modern tension and conflict. Access the article and work in pairs to complete brief responses to the following questions:

* What are some of the key challenges highlighted in the article regarding the future of conflict and violence?
* How has technology impacted the nature of conflict and violence in recent years?
* According to the article, what are some potential consequences of rising global inequality?
* How does the UN plan to address the complex issues surrounding conflict and violence in the coming years?
* Identify the dominant drivers of, or influences on, conflict between nations.
* In what ways can individuals and communities work towards creating a more peaceful and secure future?

In groups, research and complete Table 7 on conflict and tension locally and around the world. Provided in the activity are resources related to each tension and conflict.

Table 7 – conflict and tension locally and around the world

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Conflict or tension | Parties to the conflict or tension | Trigger | Impacts | Responses | Assess the response |
| Iraq war  [The Iraq War](https://www.cfr.org/timeline/iraq-war) |  |  |  |  |  |
| Tension between USA and China  [U.S.-China Relations](https://www.cfr.org/timeline/us-relations-china) |  |  |  |  |  |
| Blue Mud Bay  [Wet or Dry, it's Aboriginal land: The Blue Mud Bay Decision on the Intertidal Zone](http://classic.austlii.edu.au/au/journals/IndigLawB/2008/27.html) |  |  |  |  |  |

### Antarctica, a regional contested space

Research and create an overview of the spatial patterns and characteristics of the environment of Antarctica using a map.

Table 8 – spatial patterns and characteristics

|  |  |  |
| --- | --- | --- |
| Antarctica – contested | Overview of the spatial patterns | Overview of the characteristics |
| Location and size |  |  |
| Physical geography |  |  |
| Human geography |  |  |

Complete Table 8 and include the following:

**Location and size**

* latitude and longitude of Antarctica, with the South Pole at 90° S
* distance from other countries, such as Australia, New Zealand, and South American countries such as Chile.
* size of the whole landmass including the East Antarctic Ice Sheet, West Antarctic Ice Sheet and the Antarctic Peninsula

**Physical geography**

* topography, including mountain ranges like the Transantarctic Mountains, and the highest peak, Mount Vinson, along with valleys and elevation variations
* volcanoes, such as Mount Erebus, and glaciers, including the Lambert Glacier, the world's largest glacier
* vegetation, primarily limited to mosses, lichens, and algae, due to the harsh climate
* climate, characterised by extreme cold, strong winds, and minimal precipitation, with coastal temperatures ranging from winter and summer
* animals in the sea ice, including seals, penguins, and various types of whales, as well as krill and other marine life

**Human geography**

* population, with people residing in Antarctica during the summer and winter
* origin, with scientists and support staff participating in research activities
* purpose of scientific research, including climate change, meteorology, geology, biology, and astronomy, with international cooperation through the Antarctic Treaty System

Resources that may assist in completing this task include:

* [Antarctic and sub Antarctic maps](https://www.antarctica.gov.au/about-antarctica/geography-and-geology/geography/maps/)
* [Weather and climate](https://www.antarctica.gov.au/about-antarctica/weather-and-climate/)
* [Antarctic geography and geology](https://www.antarctica.gov.au/about-antarctica/geography-and-geology/)
* [Plants and microbes](https://www.antarctica.gov.au/about-antarctica/plants/)
* [Antarctic animals](https://www.antarctica.gov.au/about-antarctica/animals/)
* [Ice and atmosphere](https://www.antarctica.gov.au/about-antarctica/ice-and-atmosphere/)
* [Map of Antarctica and the Southern Ocean](https://geology.com/world/antarctica-satellite-image.shtml).

Use a topographic map such as [Antarctic and sub-Antarctic maps](https://www.antarctica.gov.au/about-antarctica/geography-and-geology/geography/maps/) to complete the following task. In pairs or small groups, select a geographical tool from the list below and complete it using the map:

* distance between locations
* directions and bearings
* aspect, area, and grid references
* latitude and longitude
* interpreting contour lines
* calculating local relief
* calculating gradient of a slope as a ratio
* constructing and annotating a cross-section from a topographic map
* calculating and interpreting the vertical exaggeration of a cross-section
* determining the density of a specific feature on a map.

Share the results with the class.

Reflect on the challenges encountered while applying these skills and how to improve proficiency in topographic mapping.

Summarise the importance of topographic mapping skills in studying spatial features and characteristics of regions like Antarctica.

Write a short response describing the spatial patterns and characteristics of Antarctica.

Access the Antarctic territorial map using [Antarctic and sub-Antarctic maps](https://www.antarctica.gov.au/about-antarctica/geography-and-geology/geography/maps/) or [Slices of the Pie: Mapping Territorial Claims in Antarctica](https://www.visualcapitalist.com/mapping-territorial-claims-in-antactica/).

Complete [Thinking skills – 5 whys](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/638?clearCache=83b24099-d5f6-ee9a-6c9e-6db91579a233) relating to issues that may arise on the ownership of Antarctica.

Use the resources provided below to complete a [mind map](https://app.education.nsw.gov.au/digital-learning-selector/LearningActivity/Card/542?clearCache=e2508b6d-35e8-a548-71e8-936c84a7900f), titled, ‘An overview of the Antarctic Treaty.’ This mind map should cover the following aspects of the Treaty:

* Why was the Treaty established?
* What are the 4 international agreements that make up the Treaty?
* What activities does the Treaty allow and encourage?
* What activities does the Treaty ban?
* How have countries responded to this change? Why have additional countries joined since the original Treaty was established?

Resources:

* [History of the Antarctic Treaty](https://www.antarctica.gov.au/about-antarctica/law-and-treaty/history/)
* [Explainer: Keeping conflict on ice with the Antarctic Treaty](https://theconversation.com/explainer-keeping-conflict-on-ice-with-the-antarctic-treaty-2197)
* [Antarctic Territories Explained: Geopolitics in Antarctica (10:32)](https://youtu.be/a22fYMe-6uw)
* [Who owns Antarctica?](https://www.antarctica.gov.au/about-antarctica/people-in-antarctica/who-owns-antarctica/)

In small groups, select one or more categories from Table 9. In groups discuss and research the selected topic, using the table as a starting point.

Table 9 – influences on political tension and conflict in Antarctica

|  |  |  |  |
| --- | --- | --- | --- |
| Influences on political tension and conflict | Factors | Potential key points | Student response |
| Geopolitical interests | Territorial claims | * Overlapping claims by various countries * Unresolved disputes |  |
|  | Strategic location | * Proximity to shipping routes * Access to resources in the Southern Ocean |  |
| Resource competition | Oil and gas reserves | * Potential for vast hydrocarbon deposits * Conflicting claims over resources |  |
|  | Freshwater reserves | * Melting ice caps as a source of freshwater * Increasing global demand for freshwater |  |
|  | Fishing grounds | * Rich marine ecosystems * Overfishing and disputes over quotas |  |
| Scientific research | International collaboration | * Shared research facilities and stations * Joint scientific projects |  |
|  | Espionage concerns | * Potential for military applications * Dual-use technologies |  |
| Climate change | Melting ice caps | * Rising sea levels * Impact on coastal cities and ecosystems |  |
|  | Loss of habitat | * Impact on Antarctic wildlife * Loss of biodiversity |  |
|  | Increased accessibility | * Opening of new shipping routes * Easier access to resources |  |
| Tourism and environmental concerns | Impact of tourism | * Disturbance to wildlife * Pollution and waste management issues |  |
|  | Preservation efforts | * Establishment of protected areas * Balancing tourism with environmental conservation |  |
| Legal frameworks and governance | Antarctic Treaty System | * Principles of peace and cooperation * Limitations and enforcement |  |
|  | Future governance challenges | * Adapting to changing environmental conditions * Addressing emerging conflicts and disputes |  |

Present the group findings to the class and engage in further discussion and respond to questions from peers.

As a class, discuss the question: ‘How do territorial claims and overlapping interests create contested spaces in Antarctica?’

Select a specific conflict or issue related to Antarctica. Analyse the case study, describe the main stakeholders and their interests, and propose possible resolutions or ways forward.

Use the guiding questions below to create an informative and visually appealing poster or [infographic](https://app.education.nsw.gov.au/digital-learning-selector/LearningTool/Card/653?clearCache=a3bd6f33-911e-b91d-2533-fc718bf76e24) summarising the selected topic, including key facts, challenges, and potential solutions.

Guiding questions:

* What spatial patterns can be observed in the distribution of research stations and territorial claims in Antarctica?
* How do the spatial characteristics of Antarctica, such as its remoteness, harsh climate, and vast ice sheets, impact human activity and influence the development of contested spaces?
* How do the spatial patterns of resource distribution, such as oil, gas, and fish stocks, contribute to tensions and conflicts in Antarctica?
* How do international treaties and agreements, such as the Antarctic Treaty System, impact the spatial patterns of human activities in Antarctica?
* How do climate change and melting ice caps affect the spatial characteristics of Antarctica, and what are the implications for contested spaces in the region?
* How do spatial patterns of tourism and environmental preservation efforts intersect in Antarctica, and what challenges do they present for managing contested spaces?
* How do spatial patterns of scientific research and collaboration influence the development of contested spaces in Antarctica, particularly regarding concerns about espionage and dual-use technologies?
* How do geopolitical factors, such as the strategic location of Antarctica and proximity to shipping routes, influence spatial patterns of human activity and contribute to the region's contested spaces?

Discuss the following questions:

* How do economic factors impact the exploration and development of Antarctica?
* What are the environmental challenges facing Antarctica and how are they being addressed?
* In what ways does the social dimension affect scientific research and governance in Antarctica?
* How does cultural diversity affect international collaboration in Antarctica?
* What measures are being taken to protect Antarctica's delicate ecosystem from pollution and human activity?
* Using the criteria below, choose one of the questions above and write a structured response.

Student’s response should include:

**Introduction:** students should start with an introduction that briefly explains the topic they are discussing and why it is important.

**Background information:** students should provide some background information on the topic, such as key terms, definitions, and historical context, to help the reader understand the issue at hand.

**Research and analysis:** students should use evidence and research to support their argument and analyse the data to draw conclusions.

**Examples and case study:** students should provide specific examples and case study to illustrate their points and add depth to their analysis.

**Conclusion:** students should conclude their response by summarising their main points and highlighting the implications and importance of their findings.

**References:** students should include a list of references or sources they consulted during their research, properly cited according to the chosen citation style.

Explore and discuss various opportunities to enhance environmental sustainability and human wellbeing in Antarctica.

Brainstorm possible opportunities for enhancing sustainability and wellbeing such as:

* renewable energy resources
* waste management
* biodiversity conservation
* climate change and its impacts on Antarctica
* scientific research and international cooperation
* tourism regulations.

**Group activity –** This scenario requires students to make decisions about the development and implementation of policies, projects, or initiatives aimed at enhancing environmental sustainability and human wellbeing in Antarctica.

**Scenario**

The Antarctic Treaty System has recently approved the establishment of a new research station in Antarctica. The goal of this research station is to conduct essential scientific research related to climate change, glaciology, marine biology, and other important fields. The treaty requires that all new research stations adhere to strict environmental sustainability and human wellbeing standards.

The government responsible for the construction and operation of this new research station has launched an open competition, inviting teams of architects, engineers, and scientists to submit their proposals for the design of the station. The winning design will be awarded a grant to collaborate with the government in developing and constructing the new research station.

Each team must design a sustainable research station that meets the following criteria:

* Energy efficiency: the research station should primarily rely on renewable energy sources such as solar, wind, or geothermal power and incorporate energy-efficient building materials and technologies.
* Waste management: the station should minimise waste production, recycle materials whenever possible, and manage waste disposal in an environmentally responsible manner, ensuring no negative impacts on the Antarctic environment.
* Biodiversity conservation: the research station should minimise its ecological footprint and protect local flora and fauna. The design should include measures to prevent the introduction of invasive species and minimise the disturbance of wildlife habitats.
* Human wellbeing: the station should promote the mental and physical wellbeing of its inhabitants by providing comfortable living quarters, recreational facilities, and opportunities for social interaction. The design should also ensure the safety and health of the researchers, considering Antarctica's extreme climate conditions.
* Adaptability: the research station should be able to accommodate changes in research priorities and technological advancements. The design should be flexible and adaptable to support the evolving needs of the scientific community.
* International collaboration: the research station should be designed to facilitate cooperation among scientists from different countries and disciplines, fostering a collaborative research environment.

Each group represents a different stakeholder in Antarctica such as scientists, environmentalists, government representatives, indigenous communities, and tourism operators.

Design a sustainable research station that meets the criteria provided.

Research the stakeholder's perspective and prepare the arguments.

Present the arguments in a simulated meeting followed by a whole-class discussion about the challenges and opportunities related to sustainability and wellbeing in Antarctica.

Conduct a debate on the pros and cons of tourism in Antarctica, considering its impacts on environmental sustainability and human wellbeing. Consider factors such as economic benefits, environmental impacts, cultural aspects, and the role of regulation in managing tourism activities.

After the debate, hold a class discussion to reflect on the various perspectives and explore potential solutions for managing tourism sustainably in Antarctica.

## Additional information

The information below can be used to support teachers when using this teaching resource for Geography 11–12 (2022).

### Support and alignment

**Resource evaluation and support:** all curriculum resources are prepared through a rigorous process. Resources are periodically reviewed as part of our ongoing evaluation plan to ensure currency, relevance, and effectiveness. For additional support or advice contact the HSIE Curriculum team by emailing [hsie@det.nsw.edu.au](mailto:hsie@det.nsw.edu.au).

**Alignment to system priorities and/or needs:** [School Excellence Policy](https://education.nsw.gov.au/policy-library/policies/pd-2016-0468), [School Success Model.](https://education.nsw.gov.au/public-schools/school-success-model/school-success-model-explained)

**Alignment to the School Excellence Framework:** this resource supports the [School Excellence Framework](https://education.nsw.gov.au/policy-library/policies/pd-2016-0468) elements of curriculum (curriculum provision) and effective classroom practice (lesson planning, explicit teaching).

**Alignment to Australian Professional Teaching Standards:** this resource supports teachers to address [Australian Professional Teaching Standards](https://educationstandards.nsw.edu.au/wps/portal/nesa/teacher-accreditation/meeting-requirements/the-standards/proficient-teacher) 3.2.2, 3.3.2.

**Consulted with:** Curriculum and Reform, Inclusive Education, Multicultural Education, Aboriginal Outcomes and Partnerships and subject matter experts

**NSW syllabus:** Geography 11–12 Syllabus (2022)

**Syllabus outcomes:** GE11-01, GE11-02, GE-11-03, GE-11-04, GE11-05, GE11-06, GE11-07, GE11-08, GE11-09

**Author:** Curriculum Secondary Learners

**Publisher:** State of NSW, Department of Education

**Resource:** Program of learning.

**Related resources:** further resources to support Geography Stage 6 can be found on the [HSIE curriculum page](https://education.nsw.gov.au/teaching-and-learning/curriculum/key-learning-areas/hsie) and the [HSC hub](https://www.hschub.nsw.edu.au/).

**Professional learning:** relevant professional learning is available through the [HSIE statewide staffroom](https://teams.microsoft.com/l/team/19%3ace47173b5fe14e16918eac8ca5e40913%40thread.skype/conversations?groupId=cc91cc45-b966-4333-b01f-31e78225fac4&tenantId=05a0e69a-418a-47c1-9c25-9387261bf991).

**Universal Design for Learning:** [Universal Design for Learning planning tool](https://education.nsw.gov.au/teaching-and-learning/learning-from-home/teaching-at-home/teaching-and-learning-resources/universal-design-for-learning). Support the diverse learning needs of students using inclusive teaching and learning strategies.

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## References

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[Geography 11–12 Syllabus](https://curriculum.nsw.edu.au/syllabuses/geography-11-12-2022) © NSW Education Standards Authority (NESA) for and on behalf of the Crown in right of the State of New South Wales, 2022.

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