

World Geography

(8th Grade Honors, 9th Grade General Ed)

Learning in Place, Phase IV

May 18 – June 5



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Name: _____

School: _____

Teacher: _____

World Geography Learning in Place, Phase IV

May 18-22

✓	Task	Text	Write
	How is global warming impacting the coral reefs?	Task 1, Document A Only	<p>1. Complete the following political cartoon evaluation using the following guiding questions.</p> <p>a. Describe the action taking place in the political cartoon. Explain the message in the cartoon.</p> <p>b. What is the cartoonist's opinion on this issue?</p> <p>c. What other opinion can you imagine another person having on this issue?</p> <p>d. Did you find this cartoon persuasive? Why or why not?</p>
	How have coral reefs in the Pacific Island regions changed over time and what factors have led to the change?	Task 1, Documents A-D	<p>2. Complete the task, including all guiding questions for Documents A-D. In your response to the Driving Historical Question, cite evidence from all 4 documents in support of your claim.</p>
	What types of individual action can help combat climate change?	Task 1, Documents A-D	<p>3. Create a poster (regular computer paper is fine, or use the empty space in this packet) presenting information on climate change effect on the coral reefs in the Pacific Island region and what individuals can do to help save the coral reefs. Your poster must include :</p> <p>*At least 3 images (drawn or printed)</p> <p>*Three effects of climate change on the coral reefs.</p> <p>*Five ways individuals can help combat the impact of climate change on coral reefs.</p>

May 25-29

✓	Task	Text	Write
	What impact do elements of the physical environment have on the economy of a region?	Passage 2, Passage 3	<ol style="list-style-type: none">1. As you read: Complete the T-chart comparing and contrasting climate and economic development of Australia and New Zealand to the Pacific Islands.2. After you read: Write a summary paragraph analyzing the impact climate, resources, and isolation have had on the development of the region. Be sure to highlight the differences in economic development between Australia and New Zealand and the rest of the region.
	In what ways do economic characteristics influence regional development? What impact do elements of the physical environment have on the economy of a region?	Document 4, Document 5	<p>After analyzing Document 1, complete the following questions.</p> <ol style="list-style-type: none">3. A. What percentage of New Zealand's exports go to Australia? How does that number compare with Japan? B. Of the export partners shown on the pie chart, which are Asia-Pacific Economic Cooperation (APEC) members? C. Why might Australia represent nearly one-quarter of New Zealand's exports? <p>After analyzing the photo from Document 2, answer the following questions.</p> <ol style="list-style-type: none">4. A. Quickly scan the photo. What do you notice first? B. List the people, objects, and activities you see. C. Write one sentence summarizing the photo D. Where is it from? E. What did you find out from this photo that you might not learn anywhere else?
	What impact do elements of the physical environment have on the economy of a region?	Passage 6 & Map 7	<ol style="list-style-type: none">5. As you read: Create a cause and effect chart illustrating the impact of non-native invasive species in Australia. How and why were rabbits and other species introduced in the region? What impact has the introduction of these species had on the natural habitat?6. Map Analysis: Based on the map, where were rabbits first introduced to the region? How far north had the rabbit population spread by 1900? In what ways do you think human migration has encouraged the spread of invasive species in new regions?

June 1-5

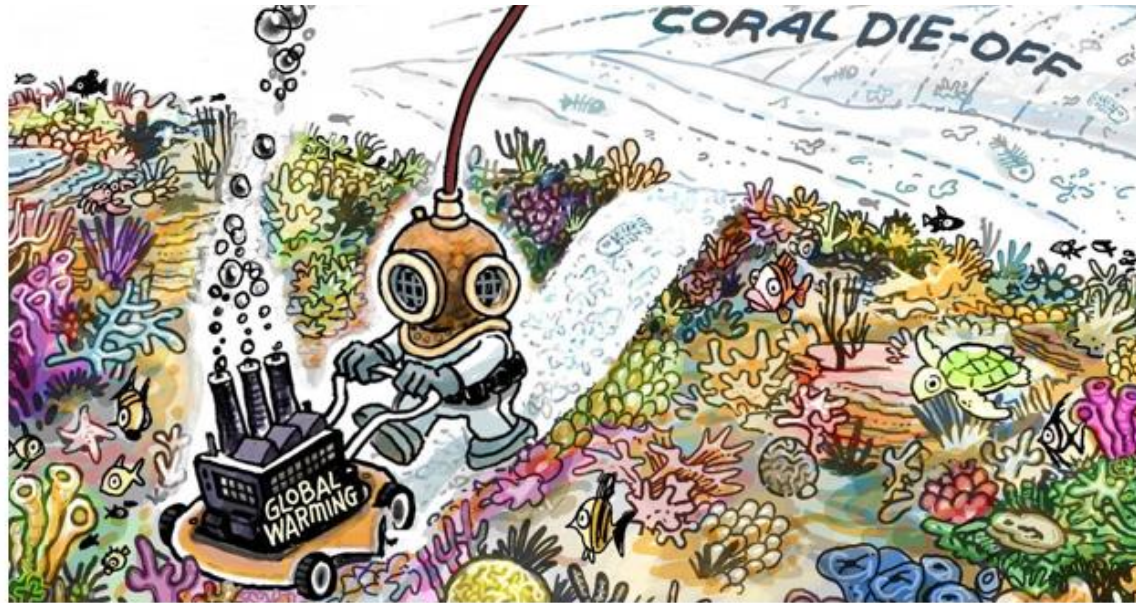
✓	Task	Text	Write
	What are the costs and benefits of urbanization?	Documents 8 and 9	<ol style="list-style-type: none"> 1. Examine the documents and make a list of the push and pull factors related to urbanization in Australia. 2. Using the documents, and your knowledge of geography, discuss the costs and benefits of urbanization to individuals and the population of Australia in general. In your opinion, do the costs outweigh the benefits? Explain in detail. If typed, 12-point font: no less than 1 page, no more than 2 pages. If hand-written, no less than 2 pages, no more than 4 pages.
	How is Antarctica similar and different from other regions we have studied?	Document 10	<ol style="list-style-type: none"> 3. AS YOU READ- Create a Venn Diagram showing how Antarctica is both similar and different to another region of your choice. 4. AFTER YOU READ: <i>Antarctica is full of untapped natural resources! In 2041, a worldwide 50-year-old code prohibiting drilling and mining will expire, which could cause global population and economic pressures to utilize these resources.</i> Using this fact, information from the reading, and your geography knowledge, write a detailed paragraph response to the following question: What are possible ways that human interactions in Antarctica could change in the future?
	How have the rights of indigenous people changed over time?	Document 11	<ol style="list-style-type: none"> 5. AS YOU READ- Create a timeline of the events related to the struggle for rights of indigenous people. 6. AFTER YOU READ- Write a detailed paragraph response explaining why the struggle for rights was so difficult for the indigenous people of the region. Consider the following questions in constructing your response: Why did colonial British settlers try to force Aborigines to assimilate? Why would the British have signed the Treaty of Waitangi if they were not going to respect Maori legal and land rights?

Task 1

Driving Historical Question: *How have coral reefs in the Pacific Island regions changed over time and what factors had led to the change?*

Part A. Closely read documents A-D and determine what is important in each document by answering the accompanying question(s).

Document A



Climate change (global warming) is the greatest global threat to coral reef ecosystems. Scientific evidence now clearly indicates that the Earth's atmosphere and ocean are warming, and that these changes are primarily due to greenhouse gases derived from human activities.

Climate change (global warming) will affect coral reef ecosystems, through sea level rise, changes to the frequency and intensity of tropical storms, and altered ocean circulation patterns. When combined, all of these impacts dramatically alter ecosystem function, as well as the goods and services coral reef ecosystems provide to people around the globe

Based on Document A, describe **one factor** contributing to the change of coral reefs over time.

Document B



Top: Careless diver damaging corals in Manado, Indonesia.
Bottom: Tourists trample over the reef in Australia.

Tourism causes a major risk to coral reefs.

A number of studies document impacts to coral reefs from divers and snorkelers. They can be caused by damage from fin kicks, pushing or holding coral, dragging gear, and kneeling/standing on coral. Not all divers cause the same amount of damage.

Scuba divers typically have more impacts on corals than snorkelers, particularly divers wearing gloves and photographers with equipment. This is because snorkelers mainly float above the corals on the surface of the water, and damage to corals is usually limited to shallow water areas where snorkelers can either stand directly on or kick corals

Trampling of corals is also common on shallow, near-shore reef flats and has led to extensive damage in areas with high levels of human use. Shoreline access points where people stand or wade to enter or exit the water can be particularly vulnerable to trampling; in such areas coral mortality from substrate contact can reach levels as high as 100%. Even in cases where high mortality does not occur, trampling can result in lower reproductive output for corals.

Based on Document B, describe one factor contributing to the decline of coral reefs.

Document C

CORAL BLEACHING

Have you ever wondered how a coral becomes bleached?

HEALTHY CORAL

1 Coral and algae depend on each other to survive.



STRESSED CORAL

2 If stressed, algae leaves the coral.



BLEACHED CORAL

3 Coral is left bleached and vulnerable.



Warmer water temperatures can result in coral bleaching. When water is too warm, corals will expel the algae (zooxanthellae) living in their tissues causing the coral to turn completely white. This is called coral bleaching. When a coral bleaches, it is not dead. Corals can survive a bleaching event, but they are under more stress and are subject to mortality.

In 2005, the U.S. lost half of its coral reefs in the Caribbean in one year due to a massive bleaching event. The warm waters centered around the northern Antilles near the Virgin Islands and Puerto Rico expanded southward. Comparison of satellite data from the previous 20 years confirmed that thermal stress from the 2005 event was greater than the previous 20 years combined.

Based on Document C, discuss one factor that contributes to coral bleaching.

Document D

Impacts of climate change in the Coral Triangle

Climate change in the Coral Triangle is already having a big impact on coastal ecosystems by warming, acidifying and raising sea levels. Coral Triangle reefs have experienced severe mass coral bleaching and mortality events as temperatures have periodically soared.

The annual, maximum and minimum temperatures of the oceans surrounding the coastal areas of the Coral Triangle are warming significantly (0.09-0.12 °C per decade) and are projected to increase by 1-4 °C toward the end of this century.

Increases of more than 2 °C will eliminate most coral-dominated reef systems.

These splendid reef systems will disappear if these events continue to increase in intensity and frequency.

Climate change impacts overview:

Coral Triangle seas will be warmer by 1-4 °C

Acidic seas will drive reef collapse

Longer and more intense floods and droughts

Sea level rise of minimum of 1 meter

More intense cyclones and typhoons

More annual climate variability in the Coral Triangle

Based on Document A, describe **one factor** contributing to the change of coral reefs over time.

Passage 2

Australia has the most diverse climate on the continent because of its large size and position on the Tropic of Capricorn, which runs through the middle of the country. Australia's northern coast is tropical. This area is used principally for dairy and beef production. The country's southern region has a Mediterranean climate. Wheat, other cereals, and oilseeds are mainly produced in this region.

Australia's interior is mainly desert, surrounded by more temperate grasslands. Sheep ranching is common in grassland areas around the desert's eastern and western edges. Australia is the world's largest exporter of wool.

Australia has a highly developed market economy. The country has access to abundant natural resources and is involved in international trade. The population enjoys a high standard of living. Most Australians work in the tertiary and quaternary sectors. The tertiary sector includes industries like retail, communications services, and healthcare. The quaternary sector focuses on financial services and information.

The Australian economy has a large primary sector. Major industries include mining, ranching, and farming. Almost 90% of Australia's agricultural land is used for ranching. This is because the continent is very dry, and arid areas are able to support cattle and sheep stations. Many ranches are located in the dry Central Lowlands. The fertile land found in coastal areas is used to grow crops like wheat, barley, grapes, and other fruit.

Roughly 86% of Australia's population lives along the coast. The rest of the population lives in rural settlements located farther inland. These rural communities are so far from the coast that they lack access to certain goods and services. They also lack the infrastructure to support large aircraft. Small planes are used to transport goods to people living in the Australian Outback.

New Zealand is an example of modern living in the region. Over 85% of the population lives in cities like Auckland and Wellington. The economy is highly developed and heavily involved in the global economy. New Zealand has a large primary sector. These industries include ranching, farming, fishing, and forestry. Other major industries are manufacturing, tourism, and financial services. Around 75% of New Zealanders work in the tertiary and quaternary sectors.

New Zealand's isolation from other continents and exposure to cold western winds and ocean currents gives it a much milder climate than Australia. This climate is suited to livestock grazing and ranching, including beef cattle, dairy cattle, and most importantly, sheep. The country is the world's largest producer and exporter of crossbred wool.

Forestry, the management of trees and other vegetation in forests, is an important economic activity in Australia and Oceania's continental islands. Australia's forest industries had a gross value of \$1.7 billion in 2008. Its main forest products are sawn wood, wood-based panels, paper, and wood chips.

The commercial fishing industry is an important contributor to economies throughout Australia and Oceania. About 600 marine and freshwater seafood species are sold in Australia for local and foreign consumption. New Zealand exports about 90 percent of its seafood to foreign countries. Fishing is a main economic contributor for the Maori, the aboriginal people of New Zealand. The Maori own about 50 percent of the country's fishing quota.

The islands of Australia and New Zealand, have important mineral and metal deposits. Australia is the world's largest producer of opal and the world's largest exporter of coal. The country is also one of the top producers of iron ore, nickel, gold, uranium, diamonds, and zinc. New Zealand is an important producer of coal, silver, iron ore, limestone, and gold.

Oil and natural gas resources are relatively low throughout Australia and Oceania. There are some offshore facilities surrounding Australia and New Zealand, although both of these developed countries consume more oil than they produce.

Passage 3

The physical geography of the Pacific Islands has also isolated the region. Individual islands are separated by vast distances of water. Air and water travel are used to transport goods and services to these remote islands. These goods include construction materials, machinery, medicine, and even foods that would be unavailable otherwise.

Most of the Pacific Islands have traditional economies, or economies based on tourism. Many of the islands are small and sparsely populated. The people survive through subsistence farming and fishing. The smallest islands lack natural resources to support development. Economic growth is also limited by the physical isolation. Certain goods and services must be transported by air or water. The natural beauty of this region attracts tourists. Some tourists come to relax at beach resorts, while others come to snorkel or scuba dive near coral reefs.

Papua New Guinea is an example of a traditional economy in the Pacific Islands. It is the second most populous country in Oceania, after Australia. Millions of people in the country have a traditional lifestyle. They live in remote areas, are self-sustaining, and have little to no contact with the modern world. Only 20% of the population lives in cities and urban areas.

Papua New Guinea lies in the warm equatorial region. Almost all of the country has a tropical wet climate. Its principal commercial crops are sweet potatoes, sugar cane, copra (dried coconut meat), coffee, cocoa, and rubber. About 85 percent of the population engages in subsistence agriculture, meaning they grow enough food to support themselves and their families. This is because Papua New Guinea is an extremely rural country, with many people living in isolated communities that have access to fertile lands but not centralized markets.

The Pacific Islands lie in a warm equatorial band between the Tropic of Cancer and the Tropic of Capricorn. The tropical islands' main agricultural products include banana, coconut, kava (a plant whose roots are made into a traditional beverage), and sugar cane. Much like Papua New Guinea, the people of the Pacific Islands practice mostly subsistence agriculture.

The lumber industry is also important to the economy of Papua New Guinea. The country has a unique forest-ownership program. Tribal clan groups own 95 percent of the total land area of the country. In order to carry out any forest-related operations, meetings must take place between government agencies and clan groups. The country's main exported trees are eucalyptus, rosewood, and pine.

In the Pacific Islands, native forests are an important part of local economies, but commercial forestry is uncommon. The Solomon Islands is one of the few Pacific Island nations that support commercial forestry. Forestry accounts for roughly 70 percent of the country's exports.

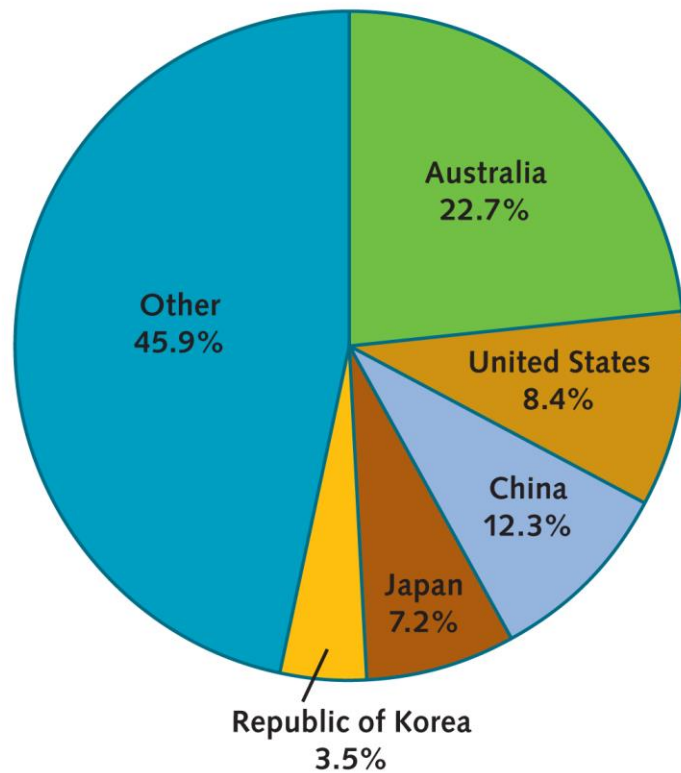
Papua New Guinea's commercial fisheries support prawn, sea cucumber, tuna, lobster, shark, and other fish. Papua New Guinea also has a diverse range of small-scale and subsistence fisheries that support rural communities.

The Pacific Islands support subsistence fisheries that are the livelihoods of many local peoples. A lack of infrastructure and investment, however, makes large-scale commercial fishing difficult. As a result, the fishing industry has poor earnings even though fish resources are abundant. For example, Pacific Island countries catch just \$600 million worth of tuna, while foreign nations fishing in the same waters catch more than \$2 billion worth.

Some Pacific islands have important mineral and metal deposits. Papua New Guinea's mineral deposits account for 72 percent of its export earnings, and mining is one of the country's largest employers. Its main exports are copper, gold, and oil. Mining operations provide economic security to Papua New Guinea, while also contributing to environmental degradation. Island nations across the region must import almost all their oil and gas, often across great distances. The cost of oil and gas is very high in the Pacific Islands, slowing the development process.

Documents 4 & 5

NEW ZEALAND'S EXPORT PARTNERS



Source: CIA World Factbook, 2012 data

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Document 6

Australia and the Pacific Islands are home to unique plant and animal life. These species developed in isolation and do not exist anywhere else on Earth. This has created a situation where invasive species can be a serious threat. An invasive species dominates an environment by replacing native species. This generally has a negative impact.

European rabbits hurt Australia's native species and crops. Besides their lack of natural predators on the continent, their success is aided by quick breeding: They can birth more than four litters a year with as many as five kits (baby rabbits) each.

Australia has had a problem with European rabbits since their introduction to the continent in the late 19th century. Now, it is estimated that approximately 200 million feral rabbits inhabit Australia. In 1859, European rabbits were introduced into the Australian wild so that they could be hunted. Thomas Austin, a wealthy settler who lived in Victoria, Australia, had 13 European wild rabbits sent to him from across the world, which he let roam free on his estate. From this one backyard sanctuary, it took only around 50 years for these invasive (meaning non-native to the land) rabbits to spread across the entire continent.

Their numbers became so large that they destroyed crops and land, leading to soil erosion. They also negatively affected agriculture and plants by overgrazing. Not only did the rabbits wreak havoc on Australian croplands, they contributed to the decline of native plant and animal species.

These rabbits are extremely adaptive, which has played a role in their spread across the Australian continent. All the rabbits need is soil that is fit to burrow and short grasses to graze on. Since these conditions are fairly easy to come by, they can adapt to new habitats such as the deserts and plains of Australia as easily as the meadows of Europe.

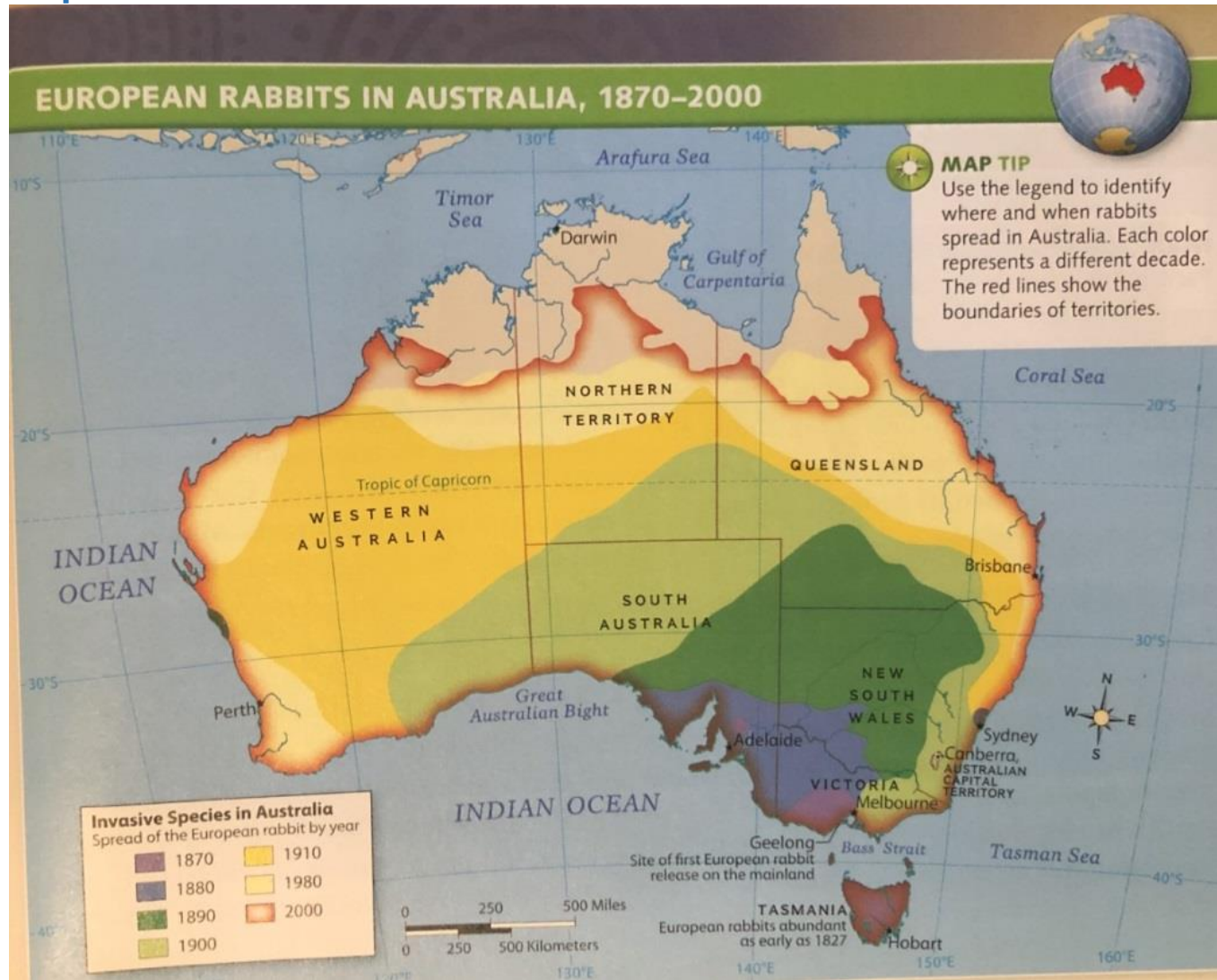
Efforts To Deal with Invasive Rabbits

Government researchers, biologists, farmers, and others have all attempted to get rid of Australia's invasive rabbits. Experts have tried a variety of techniques to manage rabbit populations, including fences, poisons, and pathogens; some have proven more successful than others.

A few decades after the rabbits first arrived in Australia, they became a major problem for farmers. Initially, both farmers and the government built fences to keep the rabbits from destroying their crops. The government even commissioned the construction of a fence that stretched across Western Australia, from the north to the south. However, fencing did little to deter the rabbits. In the case of the Western Australia fence, it merely fenced in rabbits already living in the state.

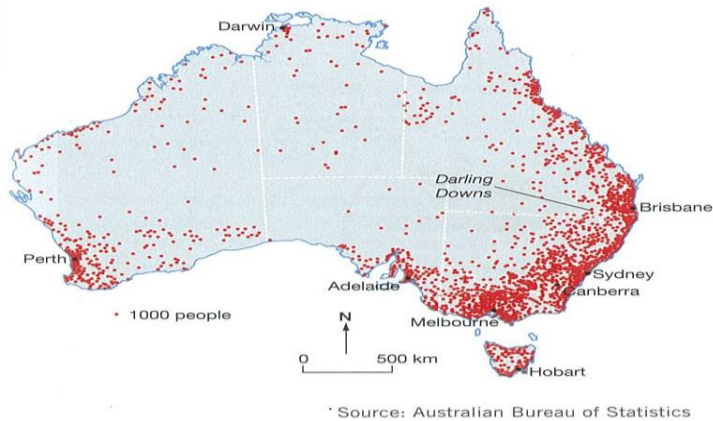
Other examples of invasive species in Australia include red foxes, pigs, European honey bees, water buffalo, cane toads, and cats. Cats were brought to the country as pets; however, many cats were released into the wild and became feral. Today, the feral cat population is estimated to be around four million. They have caused the extinction of 20 species of small mammals.

Map 7



Document 8

10.24 Distribution of the Australian population.
Each dot represents 1000 people.



- About 80% of Australians live in only 3% of our continent's land mass.
- About 89% of Australians live in urban areas.
- About 85% of Australians live within 50 km of the coast
- Australia's land mass is approximately 7,692,000 km²
- Australia's current population is approximately 23,678,000
- The land area of the 'Sydney basin' is approximately 44,000 km²
- The approximate population of the 'Sydney basin' region is 4,600,000.
- Australia is one of the most urbanized countries in the world.

Document 9

From Ranch to City

(modified from *World Cultures and Geography* by National Geographic)

Most Australians live in coastal cities, and many have migrated from rural areas. Today, Australia is one of the world's most urban countries most people live in cities or nearby suburbs. Lately, even farmers & ranchers whose families have lived in rural areas for generations are choosing to relocate. Economic pressures in farming and ranching communities are pushing people toward the cities.

A Dry Climate Turns Drier

Much of Australia's climate is arid. About 60% of the continent received fewer than 10 in of rain per year. The dry climate of Australia's interior makes farming and ranching difficult. Farmers have mainly depended on irrigation, rather than rainfall, to water their crops. Sheep and cattle ranchers whose livestock graze in dry areas, also depend on irrigation.

However, irrigation comes with problems of its own. Years of continuous irrigation have helped cause salinization, which occurs when salt accumulates and soil. Too much irrigation into normally dry land raises the natural water table and causes salts to rise to the surface. Crops cannot grow in this salty soil. Low rainfall and high evaporation rates make the soil in the interior of Australia prone to salinization.

In 2002, the longest drought in Australia's history began increased demands depleted, or drained, major irrigation sources such as the Murray and Darling rivers in New South Wales. The drought caused severe weather water shortages and the amount of water allowed for irrigation was greatly reduced. Farmers could not water their crops and ranchers sold entire herds of sheep and cattle at auction.

The Pull to Cities

In Australia's interior, few alternatives to farming and ranching exist. Faced with the combination of drought and poor soil, farmers and ranchers have had to make hard choices. Many are moving to the cities on the coasts.

Families are also drawn to urban areas because of more plentiful goods and services, including better schools for their children. Today, nearly 75% of the population lives in one of five coastal cities: Sydney, Melbourne, Brisbane, Perth, and Adelaide.

Document 10

Human Footprint in Antarctica

(modified from *World Cultures and Geography* by National Geographic)

People from all over the world have been interested in Antarctica for hundreds of years. Antarctica lies on the south pole and has one of the most extreme climates on earth. No humans live there permanently, but people have left their footprint through exploration and research.

Early Explorations

As early as 1773, captain James Cook, a British naval captain, began looking for a southern continent. Ice blocked his southward journey. In 1820, British and Russian explorers were the first to report sighting land. American Charles Wilkes surveyed a 1,500-mile stretch of coastline in the late 1830s. His observations confirm that Antarctica is a continent. Later explorers investigated Antarctica's thick sheets of ice and the ranges of the Transantarctic mountains. They also explored the continent's coastal ice shelves, or floating sheets of ice that are attached to a landmass.

Twentieth-century explorers made further discoveries. One dramatic event involved the race to the south pole. In 1911, Robert Falcon Scott, from Great Britain, and Roald Amundsen, from Norway, each led expeditions to the south pole. Amundsen's team reached the south pole first. Though Scott's expedition also reached the south pole, none of its members survived the months-long journey back to base camp.

From 1929 through the 1940s, National Geographic supported American naval officer Richard Byrd as he explored the continent, both on land and by air. He studied its ice, rocks, and minerals and made observations about earth's magnetism. Byrd's team also photographed Antarctica's coastline and discovered 26 new islands.

An International Treaty

By 1958, scientists from several different countries had built more than 50 scientific stations, or places to carry out research. Seven of these countries claimed the sections of Antarctica as their own. However, some countries, including the United States, did not recognize the claims as legal. Then in 1959, twelve countries signed the Antarctic Treaty. According to the treaty, the continent can be used only for peaceful purposes. Any scientific discoveries must be shared internationally.

Today, Antarctica continues to serve as a center of research and global cooperation. One study, called the International Polar Year 2007-2008, involves scientists from more than 60 countries. Working together on more than 200 research projects, scientists collected data on fitting ice sheets in order to determine their effects on global sea levels. Studying changes in Antarctica help scientists understand changes in other parts of the world.

Document 11

Rights for Indigenous People

(modified from *World Cultures and Geography* by National Geographic)

Direct British rule ended in Australia and New Zealand in the early 1900s. However, the effects of colonial rule on indigenous people remain today indigenous groups continue to address social and political problems.

Aborigines in Australia

In the 18th and 19th centuries, British settlers took lands away from Australia's Aborigines. Many Aborigines died in violent conflicts with Europeans. Others were forced to live on reserves, or land set aside for native people. Colonial British rulers and active laws and policies that promoted, and often forced assimilation. Assimilation is a process in which a minority group is pressured to give up its cultural practices and be absorbed into another society's culture.

One way in which the British tried to force Aborigines to assimilate was by separating Aboriginal children from their parents. Children were placed in mission schools and homes. This practice took place from the early 1900s until the 1960s. An estimated 100,000 children were separated from their families, most of them permanently. They were referred to as the "Stolen Generation."

In the 1960s the Aborigines that struggle to gain basic civil rights intensified. By 1962, Aborigines were able to vote in national elections for the first time. Five years later they were finally included as citizens in the Australian census. The Aboriginal Land Rights Act passed in 1976 gave Aborigines the right to reclaim or take back, land in the northern territory that had once belonged to their ancestors. In 2008, the Australian government apologized for the years of unjust treatment toward the Aborigines.

Today, Aborigines are still working to improve their lives. Unemployment and illiteracy rates are high. Especially in rural communities, access to adequate healthcare and education is unpredictable. After many years of hardship, Aborigines continue to press for social and political equality.

Maori in New Zealand

The Maori are the indigenous people of New Zealand. They arrived from Polynesia in the 1300s and were New Zealand's only inhabitants until the British arrived in the late 1700s. Like the aborigines in Australia, the Maori struggled with the British for control of

their land. Although the 1840 Treaty of Waitangi granted the Maori legal and land rights, it was largely ignored for more than 100 years. The Maori people have organized politically, and, like Australia's Aborigines, have had some success achieving civil rights and reclaiming lands.