

91243R



Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Level 2 Geography 2025

**91243 Apply geography concepts and skills to
demonstrate understanding of a given environment**

Credits: Four

RESOURCE BOOKLET

Refer to this booklet to answer the questions for Geography 91243.

Check that this booklet has pages 2–13 in the correct order and that none of these pages is blank.

YOU MAY KEEP THIS BOOKLET AT THE END OF THE EXAMINATION.

Relevant geographic concepts

Processes

A sequence of natural and/or cultural actions that shapes and changes environments, places, and societies. Some examples of geographic processes include erosion, migration, desertification, and globalisation. Processes can have temporal or spatial variations, meaning they can occur over time or in different locations.

Environments

May be natural and/or cultural. They have particular characteristics and features, which can be the result of natural and/or cultural processes.

Location

Where something is found. Location can be an advantage or a constraint. Location can be described in absolute or relative terms.

Perspectives

Ways of seeing the world that help explain differences in decisions about, responses to, and interactions with, environments. Perspectives are bodies of thought, theories, or world views that shape people's values and have built up over time.

Change

Involves any alteration to the natural or cultural environment. Change can be spatial and/or temporal. Change is a normal process in both natural and cultural environments. It occurs at varying rates, at different times, and in different places.

Interaction

Involves elements of an environment affecting each other and being linked together. Interaction incorporates movement, flows, connections, links, and interrelationships, which work together and may be one- or two-way interactions. Landscapes are the visible outcome of interactions. Interaction can bring about environmental change.

Accessibility

Accessibility refers to how easy it is to reach a location. Accessibility can be measured in terms of distance, travel time, costs, transport flows, and ease of travel. Changes in transport or travel cost can affect accessibility. Accessibility can be an advantage or a constraint.

Glossary of useful terms

Entrepreneurship: creating and setting up a new business, with the aim of delivering something new or improved to the market.

Globalisation: the process by which businesses or organisations develop international influence or start to operate on an international scale.

Innovation: the use of new ideas, methods, or products to improve the way something is done, to solve a problem, or to meet a need.

SINGAPORE: AN INTRODUCTION

Singapore is a tiny island nation at the southern tip of the Malay Peninsula. Despite its geographical limitations, it has developed into a global economic centre. Its rapid change from a colonial outpost to a successful large city is due to its strategic location, leadership, and firm commitment to economic development.

RESOURCE A: Locational maps of Singapore



Figure 1: Location of Singapore on a world map.

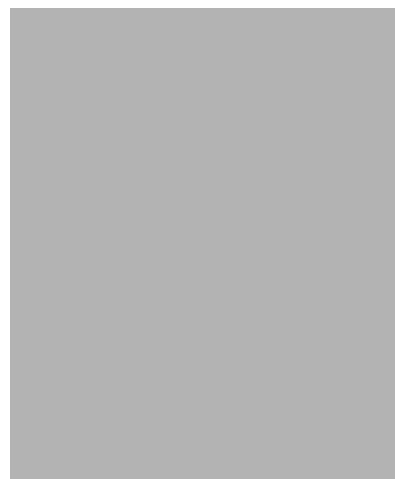


Figure 2:

The black spot shows the relative size of Singapore compared to New Zealand.

Singapore has an area of 716 km² and New Zealand has an area of 270,467 km².



Figure 3 (left): Location of Singapore in Southeast Asia.

Figure 4 (right): Location of Singapore (red circle) relative to New Zealand, Australia, India, and China.

RESOURCE B: Singapore, 2024



Figure 5: Satellite image of Singapore.

THE DEVELOPMENT OF SINGAPORE

RESOURCE C: Singapore's history

Colonial era

Singapore's history is connected with its strategic location. As a trading post for various empires, the island's strategic importance was evident. The British established a colony on Singapore in 1819, recognising its potential as a naval base and commercial hub. Under British rule, Singapore developed into a major port city, making trade between Europe and Asia much easier.

The British colonial period significantly shaped Singapore's development. The British introduced modern infrastructure, such as railways and roads, and established schools. These developments laid the foundation for Singapore's future growth. However, the colonial era also brought about social and economic inequalities, as the British favoured certain ethnic groups over others.

Independence and economic transformation

Singapore joined the Federation of Malaysia in 1963. It gained independence from Malaysia in 1965, facing significant challenges, including a lack of natural resources and a small population. Despite these obstacles, Singapore's leaders, led by Prime Minister Lee Kuan Yew, implemented a series of policies aimed at economic development and social stability.

One of the key factors contributing to Singapore's economic success was its strategic location. The island's position at the crossroads of major shipping routes made it an ideal hub for international trade. Singapore's government invested heavily in infrastructure, developing modern ports, airports, and transportation systems, to facilitate trade and attract foreign investment.

Singapore's port – the connection to the world

The Singaporean port region, recognised as one of the largest in the world, spans an area of approximately 93 km². The Port of Singapore includes terminals located at Tanjong Pagar, Keppel, Brani, Pasir Panjang, Sembawang, Jurong, and Tuas, which cater to the needs of vessels ranging from oceangoing liners to smaller ships.

Situated between the islands of Brani and Sentosa, the Keppel wharves offer deepwater access, and contain significant docks and warehouses. Keppel serves as the primary shipment hub within Southeast Asia for the transport of commodities, such as oil, rubber, plywood, timber, and spices. The port's main imports are machinery, textiles, and rice.

Land reclamation

The reclamation of land from surrounding waters is used in Singapore to expand its limited area of usable, natural land. Land reclamation is most simply done by adding material, such as rocks, soil, and cement, to an area of water. Alternatively, submerged wetlands or similar ecosystems can be drained.

Land reclamation allows for increased development and urbanisation, and has been useful to expand Singapore's land area. Singapore was restrained by its geographical boundaries, and thus traditionally limited by the existing shoreline. The use of land reclamation allowed Singapore to expand outwards by recovering land from the sea.

RESOURCE D: Singapore's shipping trade

Port	Distance from Singapore (km)
London, UK	11,200
New York City, USA	15,200
Tokyo, Japan	3,800
Shanghai, China	5,700
Hong Kong, China	2,100
Dubai, UAE	5,800
Mumbai, India	6,600
Jakarta, Indonesia	1,500
Seoul, South Korea	3,600
Sydney, Australia	4,700



Figure 6 (above): Ships waiting outside the Singapore port.

Figure 7 (left): Singapore's distance to trading partners.

RESOURCE E: Changi Airport – a gateway to the world

Singapore's Changi Airport is one of the most well known and busiest airports in the world. Changi Airport is located on reclaimed land in the east of the island of Singapore. The construction of Changi Airport was a huge project that showcased Singapore's commitment to becoming a global aviation hub. The airport can handle over 68 million passengers annually and connect to more than 400 cities worldwide.

Changi Airport's strategic location makes it a crucial transit hub for travellers between Europe, Asia, and Australasia. The airport has won numerous awards, including being named the world's best airport by Skytrax multiple times. The airport supports thousands of jobs and contributes significantly to the country's Gross Domestic Product (GDP).

Changi Airport offers a range of amenities, including luxurious lounges, diverse dining options, high-end shopping, and unique attractions such as the Rain Vortex indoor waterfall and the Butterfly Garden. These features make transiting through Changi a memorable experience for business and leisure travellers.



Figure 8: Image depicting a planned new terminal at Changi Airport.



Figure 9: The Rain Vortex inside the airport.

RESOURCE F: Current economic drivers

In addition to its strategic location, Singapore's economic success was also driven by its pro-business policies. The government created a stable and predictable business environment, with low taxes and efficient government. These policies attracted multinational corporations to set up operations in Singapore, contributing to its economic growth.

Today, Singapore's economy is highly diversified, with a focus on services, finance, and manufacturing. The financial sector is a major contributor to the economy, with Singapore serving as a regional financial hub for Southeast Asia. The manufacturing sector, while not as strong as in the past, remains important, particularly in high-tech industries such as electronics and medicines.

The Singapore government played a crucial role in driving economic growth through its policies and initiatives. These include investing in education and training, promoting innovation and research, and fostering a culture of entrepreneurship.



Figure 10: Google's Singapore office.



Figure 11: The top companies in Singapore to work for, according to an employee survey.

Singapore's services sector is the largest component of its economy, accounting for over 70% of its GDP. This sector includes a wide range of activities, such as tourism, transportation, healthcare, and education.

RESOURCE G: Tourism in Singapore

Singapore's tourism industry is a vital contributor to its economy. In 2019, the sector generated over SGD27.7 billion* in tourism receipts and supported over 239,000 jobs. Singapore's tourism industry is known for its diverse offerings, including cultural attractions, world-class shopping, and vibrant nightlife. Its strategic location and excellent infrastructure make it an attractive destination for business and leisure travellers alike.

The Singapore Tourism Board (STB) plays a key role in promoting Singapore as a tourist destination and developing the tourism industry. The STB works closely with industry stakeholders to create innovative and engaging tourism experiences that attract visitors from all over the world.

*SGD=Singapore dollars

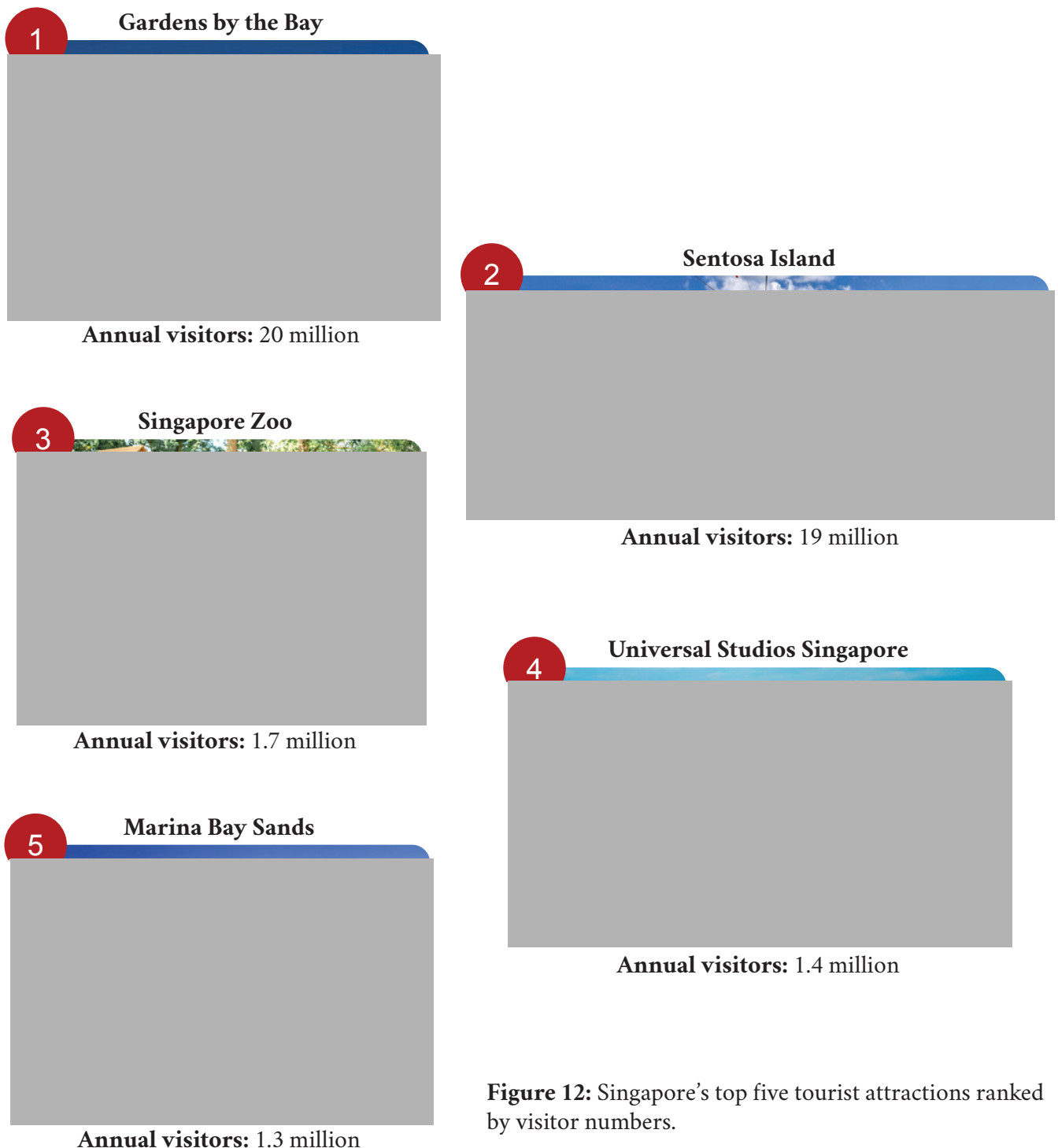


Figure 12: Singapore's top five tourist attractions ranked by visitor numbers.

RESOURCE H: Key events in Singapore's history

13th century	A port develops around the harbour
14th century	Chinese navigator and merchant Wang Dayuan uses the port facilities
1819	British trade agent Sir Thomas Stamford Raffles sets up a branch office
1819	A new port opens
1824	The British East India Company buys the island and develops it into a trading base
1869	Opening of the Suez Canal
1964	Singapore Tourism Board established
1966	Singapore decides to build a container terminal at Tanjong Pagar
1972	Singapore's first container terminal opens at Tanjong Pagar
1981	Opening of Changi Airport
2022	Tuas Port, the world's largest fully automated port, officially opens in Singapore

SINGAPORE: A REMARKABLE TRANSFORMATION**RESOURCE I: Changes in the natural environment**

Singapore's economic development has come with significant costs to its natural environment. The rapid urbanisation and industrialisation of the island have led to deforestation, pollution, and loss of biodiversity. To address these environmental challenges, Singapore has put in place various measures to promote sustainable development.

The government has invested in green infrastructure, such as parks, gardens, and green roofs, to improve air quality and reduce urban heat island effects. Additionally, Singapore has adopted a sustainable urban planning approach, emphasising density and public transportation to minimise the city's ecological footprint.

While Singapore has made progress in environmental conservation, it continues to face challenges, particularly in terms of managing waste and reducing its carbon footprint. Changi Airport is leading in environmental sustainability and technological innovation. The airport has implemented various green initiatives, such as energy-efficient buildings and waste reduction programmes, to help reduce its environmental impacts.

RESOURCE J: Map of Singapore, 1942

Figure 13: A map of Singapore from 1942.

RESOURCE K: Map of Singapore, 2018

Figure 14: A map of Singapore from 2018.

RESOURCE L: Urban growth in Singapore

Urbanisation in Singapore began in the 1820s with the implementation of the Raffles Town Plan, which was a land-use plan for the island's main town. However, the physical growth of Singapore was largely unplanned for most of the 1800s and early 1900s.

Urban planning in Singapore began to take shape in the 1950s, when the country started to develop a more detailed plan for its future. The 1958 Master Plan was the first legal land-use document for Singapore, and was heavily influenced by British planning practices.

The plan identified three new town sites and outlined a framework for the island's development, including the maximum residential density for each planning district.

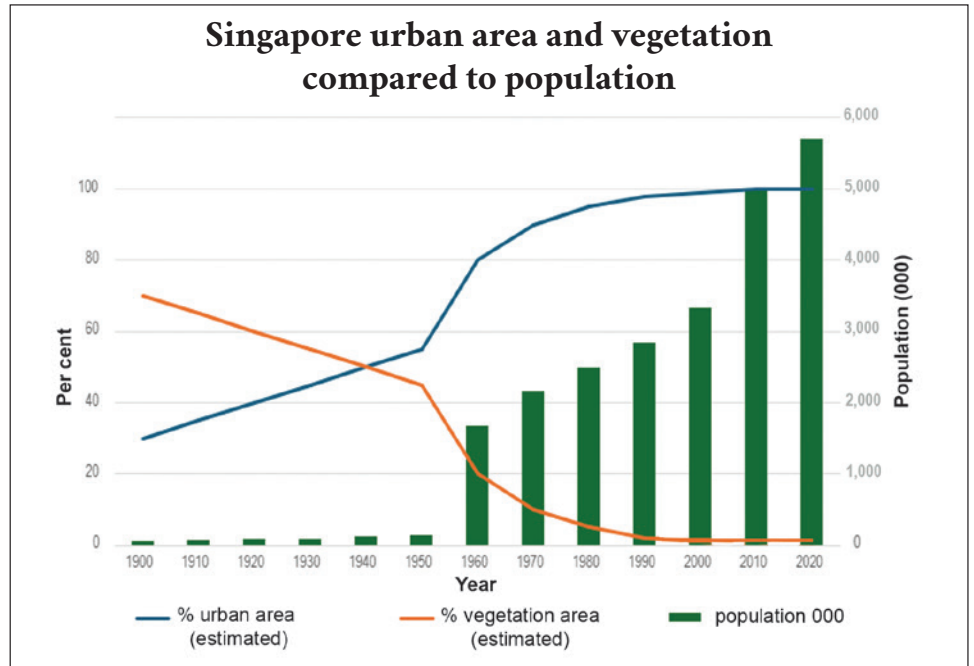


Figure 15 (above and below): The percentages of urban and vegetation areas in Singapore as its population has changed.

Year	Percentage urban area (estimated)	Percentage vegetation area (estimated)	Population
1900	~30%	~70%	50,000
1910	~35%	~65%	60,000
1920	~40%	~60%	75,000
1930	~45%	~55%	90,000
1940	~50%	~50%	110,000
1950	~55%	~45%	130,000
1960	~80%	~20%	1,670,000
1970	~90%	~10%	2,150,000
1980	~95%	~5%	2,480,000
1990	~98%	~2%	2,830,000
2000	~99%	~1%	3,330,000
2010	~99%	~1%	4,990,000
2020	~99%	~1%	5,700,000

RESOURCE M: From uncontrolled urbanisation to increased green space

Since it was first colonised by the British in 1819 and Singapore was formally founded, more than 98% of the island's vegetation has been cleared. The speed at which the state grew, both in terms of infrastructure and population, was so rapid that it lost its flora and fauna at a rate unlike any other nation.

With 90% of its forests, 67% of its native bird species, and 40% of its mammals all lost to the city's rapid growth, it became clear that the level of industrialisation was no longer sustainable.

In 1967, two years after Singapore became independent, plans were launched to transform the nation into a 'garden city', designating land to become natural reserves.

But lack of green space wasn't the only issue the city faced. Air pollution was becoming a



Conclusion

Singapore's remarkable change from a colonial outpost to a world economic superpower is due to its strategic location, leadership, and firm commitment to economic development and environmental sustainability. Despite facing significant environmental challenges, Singapore has demonstrated its ability to balance economic growth with sustainability.

The city-state's future success will depend on its ability to continue adapting to a rapidly changing global landscape and to maintain its reputation as a leading financial and business hub. As the city moves towards innovation and entrepreneurship, its location has become less important.

Acknowledgements

Material from the following sources has been adapted for use in this assessment:

Figure 1

<https://stock.adobe.com/315445649>

Figure 2

<https://www.thetruesize.com/>

<https://simplemaps.com/svg/country/nz>

Figure 3

<https://www.whereig.com/singapore/>

Figure 4

https://en.wikipedia.org/wiki/File:Singapore_on_the_globe_%28Southeast_Asia_centered%29.svg

Figure 5

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Resource C

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Figure 6

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Figure 7

<https://earth.google.com/>

Figure 8

<https://simpleflying.com/singapore-changi-new-terminal-5-design/>

Figure 9

https://apis.t2online.in/image/journal/article.jpg?img_id=747250&t=1709494304889

Figure 10

<https://www.straitstimes.com/business/companies-markets/tech-giant-hires-those-who-add-to-team-not-those-who-fit-in>

Figure 11

<https://cdn-blog.seedly.sg/wp-content/uploads/2021/04/14204801/Best-Companies-in-Singapore-2021-Survey-Results-1.png>

Figure 12

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Figure 13

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Figure 14

<https://thinkerten.com/wordpress/wp-content/uploads/2018/05/Singapore-map-2.jpg>

Resource L and Figure 15

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Resource M

<https://www.euronews.com/green/2021/11/11/how-has-singapore-learned-to-blend-nature-with-urban-living>

<https://www.nlb.gov.sg/main/article-detail?cmsuuiid=f4e013e3-bdf0-4590-a80b-7533a4c7ffc0>

