



CRESCENT GIRLS' SCHOOL
SECONDARY FOUR
PRELIMINARY EXAMINATION 2025

GEOGRAPHY

2279/01

Paper 1

26 August 2025

1 hour 45 minutes

Candidates answer on the Question Paper.

Additional Materials: Insert

Suggested Marking Guide

1 Cluster 1: Geography in Everyday Life

During their internship with the Singapore Tourism Board (STB), a group of students were tasked to investigate the benefits and costs of Singapore hosting the Formula 1 (F1) race annually.

Using information that they found online, the students came up with a simplified map of the area where the race was held, Fig. 1.1 [Insert].

- (a) (i) **Identify the type of data that students referenced, to come up with Fig. 1.1.** [1]

Possible responses include:

- The students referenced **secondary data** to come up with Fig. 1.1.

AO2

- (ii) The students were interested to find out the original land use of the area when the race was not held to do a comparison of land-use.

Suggest one source of data that the students could find this information from. [1]

Possible responses include:

- The students used information from **online search engines/street directories/reference maps from libraries/archives/government agencies.**

A01

- (b) The students understood that one of the drawbacks of the race was the diversion of traffic and its consequences for all affected roads. Fig. 1.2 [Insert] show parts of the race circuit and hence the affected roads where traffic would be diverted from Friday to Sunday of the race weekend.

As such, the students sought to find out the typical traffic count along St. Andrew's Road, one of the roads that would be affected. The students collected the data on a Sunday evening, between the timings of 5.00pm to 10.00pm at the location marked X.

Fig. 1.3 below shows the data collected.

Time	Number of vehicles
5pm	1100
6pm	700
7pm	1200
8pm	1300
9pm	800
10pm	700

Fig. 1.3

- (i) **Using Fig. 1.3, complete the graph in Fig. 1.4 to indicate the number of vehicles that were travelling along St. Andrew's Road during the study duration.** [3]
- (ii) **Evaluate the reliability of the data collected by the students.** [2]

Possible responses include:

- The data collected was **reliable because the students conducted the study for a relatively long period of 5 hours.**
- The data collected was **unreliable because the students only collected data on Sunday evening which is not representative of the whole race weekend.**
- The data collected was **unreliable because the students only did a traffic count for one of the roads which does not represent all affected roads.**

A03

- (iii) **Suggest two improvements that could be made to the data collection process.** [2]

Possible responses include:

- **The students could conduct the study for a longer duration that spans more than 5 hours/more days**
- **The students could expand the collection of traffic count to more than one affected road.**

A02

- (c) The students understood that a key benefit from the holding of the F1 race was the increase in tourism expenditure when tourists travelled to Singapore to watch the event.

Using Fig. 1.5 below, the students decided to conduct interviews with tourists to investigate the hypothesis **“During the F1 race period, tourists travel to Singapore to watch the race only.”**

Questionnaire	
1. What is your age?	a. 0 – 20 b. 21 – 40 c. 41 – 60 d. > 60
2. What is your gender?	a. Male / Female
3. Did you travel to Singapore to specially attend the Formula 1 race?	a. Yes / No
4. Are you staying in Singapore for more than 5 days?	a. Yes / No
5. Will you be attending any F1-related events or activities during your stay?	a. Yes / No

Fig. 1.5

Using Fig. 1.5, evaluate the usefulness of the questionnaire in helping the students determine if the hypothesis is valid. [4]

[Turn over

Possible responses include:

- **[Evaluation]** The questionnaire is useful because it contains questions that can elicit relevant responses that are related to the hypothesis.
- **[Additional elaboration]** For example, an answer to the question such as 'Did you travel to Singapore specifically to attend the Formula 1 race?,' will provide a useful response.
- **[Evaluation]** The questionnaire is not useful because there are questions that are irrelevant to the hypothesis.
- **[Additional elaboration]** For example, questions 1 and 2 will elicit responses that will not help students determine if the hypothesis is valid.
- **[Evaluation]** The questionnaire may be limited in its usefulness because it is made up of only close-ended questions that do not allow for hybrid or mixed responses.
- **[Additional elaboration]** For example, a tourist may have mixed thoughts about Question 3 but does not have the option to elaborate or provide more information. This could affect the information collected.

A03

- (d) The students then discussed among themselves about the sampling method and decided that they would use convenience sampling (a form of non-probability sampling) to run a pilot test of the interviews.

- (i) **Explain why the students decided to use a non-probability sampling method instead of a probability sampling method.** [2]

Possible responses include:

- **Based on the context, it is unnecessary/impractical to select an unbiased and representative sample for the sampling.**
- **It is also more efficient and can be completed quickly even with time constraints.**

A01

- (ii) **Using Fig. 1.2 [Insert], describe how the students can go about conducting the interviews using convenience sampling.** [3]

Possible responses include:

- **The students will come up with the questions for the interview survey.**
- **They will have an agreed sample size e.g., 100 respondents.**
- **They will then distribute it to the first 100 people they meet outside locations such as 'The Fullerton Hotel', 'Esplanade' or 'The Padang'. [Accept other plausible locations]**

A02

- (iii) Identify two limitations of the students' choice of sampling method. [2]

Possible responses include:

- This selection of tourists for the interview may be biased
- Data collected may be less representative of the whole population
- Data collected may not be accurate in allowing the students to draw general conclusions about the population

A02

[Total: 20]

Cluster 2: Tourism

- (a) Study Figs. 2.1 and 2.2 (Insert), which show the annual carbon dioxide (CO₂) emissions from the aviation industry in 2013 and 2024 respectively.

- (i) Using Figs. 2.1 and 2.2, compare the annual carbon dioxide emissions from 2013 to 2024. [3]

Possible responses include:

- [Similarity] North America remained among the highest emitters in both 2013 and 2024, consistently shaded in dark orange to dark red, indicating emissions in the 10 million to over 100 million tons range.
- [Difference] The overall global intensity of emissions has increased, with more countries shaded in darker tones in 2024, suggesting a broad rise in aviation-related CO₂ output.
- [Difference] From 2013 to 2024, there has been a notable increase in emissions in East and Southeast Asia, particularly in China and surrounding regions, shifting from medium orange (around 1–10 million tons) to dark red (over 100 million tons).
- [Difference] Africa, especially central and western regions, shows a visible increase in aviation emissions, moving from white or light yellow (no data or near-zero emissions) in 2013 to light orange (up to 100,000 tons) in 2024.

A02

- (ii) Explain why this change might have occurred. [3]

Suggested responses include:

- [Point] One reason for the increase in emissions is because more people are travelling to pursue their life purpose and fulfil their fullest potential.
- [Elaboration] Pilgrimage tourism is an example where tourists travel to sacred sites such as shrines, mosques, temples or churches that are central to their belief and faith. For example, every year, more than two million Muslims travel to Mecca in Saudi Arabia on an annual Hajj or pilgrimage, where they perform a series of rituals to fulfil their religious duty.
- [Point] An increase in leisure time where people are free from work responsibilities (paid leave, public holidays and shorter working weeks) has given people the increased ability to travel hence contributing to increased carbon emissions.

[Turn over

- **[Example]** For instance, in 2023, the Shandong province became the latest local government in China to promote annual leave in a bid to revitalise domestic tourism within its country.

A01

- (b) Study Fig. 2.3 [Insert], which shows ecotourism occurring in the Maasai Mara Nature Reserve in Kenya, Africa.

With reference to Fig. 2.3, explain how ecotourism achieves sustainable tourism development. [3]

Possible responses include:

- **[Point]** Ecotourism educates and increases tourists' appreciation of nature as such tours to natural areas allow tourists to experience and interact with nature.
- **[Additional elaboration]** This increases tourists' knowledge and appreciation of nature, which can encourage tourists to take action to conserve and minimise damage to the environment. This ensures environmental sustainability.
- **[Point]** Ecotourism also puts in place measures to minimise negative impacts on the environment. This allows visiting tourists to explore the conserved natural environment within safe perimeters that minimise tourist impact.
- **[Example]** For example, the Galapagos Islands in Ecuador has been intentionally conserved to retain its unique biodiversity, with 97% of the islands' total area declared a national park. Authorities implemented some rules and regulations to conserve the natural area. For instance, only a limited number of visitors is allowed in the park on any given day to minimise disturbances to wildlife.
- **[Point]** Another focus of ecotourism is to ensure that tourism revenue earned from is channelled into the conservation of the natural environment. This can be done by hiring local park rangers.
- **[Additional elaboration]** Aside from providing job opportunities to locals, these park rangers ensure that laws set up to protect the environment are adhered to. This minimises damage to the environment.

A01

- (c) Study Fig. 2.4 (Insert), which shows a scene on Maya Beach, Thailand, after tourists have left the popular tourist attraction.

Using Fig. 2.4, explain how tourism can result in negative environmental impacts. [3]

Possible responses include:

- **[Point]** The tourism industry generates a significant amount of waste and in places with no proper waste disposal systems, some tourists may leave litter behind, causing land and water pollution as seen in Fig. 2.4.
- **[Additional elaboration]** As some tourists may not be aware of the consequences of their actions, the incidents of littering may increase overtime as tourism grows, further worsening the pollution.
- **[Point]** Tourist activity can also result in an overuse of provisioning ecosystem services that depletes natural resources such as water. As water is diverted to meet the tourism industry's needs, this can dry up rivers, worsening environmental conditions.

- **[Example]** Bali, Indonesia uses approximately 3 million litres of water per day. This is due to its booming tourism industry, which draws water from public water supply systems as well as groundwater to meet the needs of tourists. As water is diverted to meet Bali's water needs, this has dried up rivers in the region and depleted available water resources for locals.

A02

(d) Explain how tourism development can result in an economic leakage. [3]

Possible responses include:

- **[Point]** Economic leakage happens when tourist revenue does not remain in the same country where it is generated. Tourist revenue may be lost to foreign-owned businesses as money is paid for the import of goods and services needed to support the tourism industry.
- **[Point]** Some of this revenue can also be lost as money is paid to other countries for the import of goods and services, as well as wages to foreign employees.
- **[Point]** In some developing countries, the extent of leakage may be so significant that it can virtually wipe out the economic benefits of tourism.
- **[Example]** For example, for a typical safari holiday in Kenya, 83% of the income generated leaks out of the country through a foreign-owned hotel chain, a Western tour operator as well as the airline company. What remains is 17% of income that goes to the local safari company and the Kenyan government.

A01

[Total: 15]

3 Cluster 3: Climate

- (a) Figs. 3.1 and Fig. 3.2 (Insert) show climographs of two locations, Mexico City and Cancun respectively. Both cities are located at different altitudes in Mexico with Mexico City having an altitude of 2,240m above sea level and Cancun at sea level.

Using Figs. 3.1 and 3.2, explain how altitude can impact the climate of both cities. [3]

Possible responses include:

- **[Compulsory point]** Cancun is located a lower altitude as compared to Mexico City; hence it experiences a higher mean annual temperature of 26.3°C as compared to 16°C for Mexico City.
- **[Explanation]** At higher altitudes, air is less dense, which means air pressure is lower. When air pressure is lower, there are fewer air molecules.
- **[Explanation]** This means that the air molecules are less able to absorb heat radiating from the earth's surface, resulting in lower temperatures. Hence, places at higher altitudes experience lower temperatures than areas near sea level.

A02

- (b) **Explain how adaptation strategies can be used to build a community's resilience to climate change.** [3]

Possible responses include:

- **[Point]** Structural adaptation strategies involve the construction of physical structures such as sea walls to ensure water and flood management. Seawalls are constructed along the coast to prevent the sea from advancing onto the land as sea level rises.
- **[Example]** In 2019, then Prime Minister Lee Hsien Loong announced that \$100 billion or more may be needed to strengthen coastal defences with seawalls so as to protect Singapore against rising sea levels.
- **[Point]** Raising awareness and educating communities on how to respond to climate change so as to minimise disruption to their livelihood in the wake of climate change. This will allow them to take appropriate steps to protect themselves from the impacts of climate change.
- **[Example]** For example, in Singapore, the public is educated on what to do when a sudden flash flood occurs, or how to prevent heat stress injuries during warm weather.

A01

- (c) Study Fig. 3.3 (Insert), which shows the damage caused by wildfires in 2024, a direct impact of how climate change affects human systems.

“The direct impacts of climate change on human systems outweigh the indirect impacts due to the geographical evenness of regions.”

With reference to Fig. 3.3, to what extent do you consider this statement to be true? Explain your answer. [9]

To note: A complete explanation paragraph will not require all the following points

Direct impacts of climate change:

Heatwaves

- A heat wave can be defined as a period of excessively hot weather that is abnormal for the location. It usually lasts for several days or longer.
- Heat waves are projected to be hotter and more frequent with climate change.
- Heat waves can cause temperatures to be as hot as over 40°C. Such high temperatures can have adverse effects on humans such as heat stroke, difficulty breathing and even death. Heat waves have caused thousands of deaths worldwide.
- Additionally, heat waves can deplete the soil moisture necessary for crops to grow, leading to widespread crop failures. This can then affect the global food supply.
- One example is the 2003 heat wave that hit Europe. It is estimated that around 70,000 people died from the heat wave which lasted for two weeks. The heat wave affected the growth of many crops such as wheat, thereby causing the price of bread to increase significantly. Food became less affordable for people.
- In 2019, two intense heat waves raged across Europe again, breaking many historical temperature records. For instance, temperatures of 45°C were recorded in France.

Droughts

- Severe droughts are becoming more frequent, especially in places with drier climates. This is because increased temperatures brought about by climate change cause higher rates of evaporation and transpiration. Increasing rates of evapotranspiration results in the loss of soil moisture, worsening the already dry conditions.
- The World Health Organisation (WHO) estimates that globally, 55 million people are affected by droughts every year. For instance, a shortage in clean water may cause people to die of dehydration. As crops perish because of a lack of water, food supply is also affected. This can cause prolonged periods of hunger and even death.
- In Afghanistan, a severe drought that persisted from 2018 to 2019 affected more than two-thirds of the country. Over 10 million people were affected due to a lack of food, and many were displaced.

Wildfires

- Wildfires are unplanned and uncontrolled fires that happen in natural areas such as forests or grasslands.
- With a warmer and drier climate, dead trees and vegetation that have dried out become easy fire starters, setting off wildfires that are also more challenging to put out.
- Wildfires can cause humans to suffer from suffocation, burns, and other heat-related injuries. Humans may also develop respiratory illnesses if they inhale large amounts of carbon dioxide, carbon monoxide and fine particulate matter that are produced as a result of wildfires.
- Wildfires can also destroy buildings and properties, resulting in homelessness and economic losses.
- In 2019-2020, wildfires raged throughout Australia. The wildfires in Australia were difficult to contain as many parts of country were already

experiencing dry conditions. Climate change further worsened the warm and dry conditions, thereby making the fires difficult to control.

- As a result of the wildfires, air quality was at hazardous levels, posing a great risk to human health. In total, 34 people died and thousands of buildings were burnt down. Many people were also left homeless due to the wildfires

Floods

- Climate change can cause higher incidences of flooding as warmer temperatures lead to excessive rainfall in some parts of the world, specifically areas which already experience high rainfall.
- Warmer temperatures can also lead to more snowmelt. When excessive amounts of water enter water bodies, this may cause rivers and lakes to overflow their banks.
- Climate change brings about sea level rise, increasing the risk of coastal floods.
- Flooding can result in a loss of human lives as well as destruction of buildings and properties. People may become homeless as their houses are destroyed. Flooding also pollutes water sources, affecting food and water supplies. It also increases the risk of spread of waterborne diseases such as cholera.
- For example, Bangladesh is a densely-populated country that experiences seasonal flooding. This is in part due to its tropical monsoon climate, where monsoon winds bring heavy rainfall between June to September.
- Climate change has also made the country extremely vulnerable to flooding as warmer temperatures are increasing the amount of meltwater coming from the icecaps and glaciers in the Himalayas. Bangladesh is also vulnerable to coastal flooding caused by sea level rise as it is a low-lying country where many live along the coast.
- In 2020, Bangladesh experienced one of the worst flooding events brought about by the monsoon rains. This flood was estimated to have caused the deaths of 260 people. 1.3 billion homes were destroyed and the damage of agricultural crops was estimated to be valued at millions of dollars. This economic loss was substantial, especially for Bangladesh which is a developing country.

Tropical Cyclones

- Tropical cyclones are intense storms that form over warm tropical oceans.
- Cyclones are accompanied by strong winds that can exceed 320km per hour, heavy rainfall of over 100mm per day, and storm surges where the sea level can rise to a height of 6 meters.
- With climate change, oceans are warmer and there is more water vapour in the atmosphere. It is believed that these conditions are driving forces for more intense tropical cyclones to form. Places which usually experience tropical cyclones such as Vietnam and the Philippines are therefore experiencing more intense tropical cyclones as global warming continues.
- Strong winds, heavy rain, and storm surges brought by the tropical cyclones can result in loss of lives due to flooding, landslides, and collapsing buildings and infrastructure. Strong winds can also destroy buildings and crops, leading to economic losses, and threatening food security
- For example, from October to November 2020, the Philippines was hit by six tropical cyclones. The strongest typhoon that hit the Philippines

was Typhoon Goni. It brought about strong destructive winds and high rainfall, leading to a loss of lives and massive destruction of properties. Nearly 1 million people had to be evacuated. It is estimated that the damage of crops amounted to almost \$36 million.

Indirect impacts of climate change:

Impact on provisioning ecosystem services

- Climate change causes an increase in ocean surface temperatures as well as ocean acidification. Such changes to the aquatic environment can prompt aquatic species to migrate to a more suitable environment. Hence, this may affect the number of aquatic species in some waters, thereby affecting fishermen's livelihoods.
- In fisheries, aquatic species may also die if they cannot cope with the sudden changes in the aquatic environment. For instance, rising sea levels can lead to saltwater entering rivers, which comprises of freshwater. This mixture of water may threaten freshwater fisheries and indirectly impact people who depend on the fisheries for their livelihoods. It may also affect a place's food security as fish supplies dwindle.
- In Cambodia, fish is a big part of the locals' diet, especially for people living near Tonle Sap, the largest lake in the country. With increasing temperatures and unpredictable rainfall, the water level in Tonle Sap has declined significantly, reducing fish habitats and the availability of fishes. Hence, this threatens the economic livelihoods and food security of Cambodians.
- While climate change has altered the aquatic conditions of some areas, other places in the world may benefit from changing climate conditions. For instance, places located at higher latitudes may benefit from the increase in migration of species in search of cooler waters.
- For example, in recent years, fishermen in Portugal have begun to catch new species, which were previously found in warmer regions. This increase in catch allows these places to be able to provide a more diverse range of seafood for consumers, allowing them to make more money to sustain their daily livelihood.
- Extreme weather events such as heat waves, droughts, floods, cyclones and wildfires can destroy crops, affecting food production.
- For example, in 2020, Thailand experienced its worst drought in four decades. A lack of rain and a shorter monsoon season led to dry reservoirs and barren land that affected the growth of crops.
- As Thailand's agricultural sector uses 70% of the nation's water supply, the drought had a severe impact on the farmers and the agricultural sector in Thailand. This impacts the economic livelihoods of farmers greatly.
- When food production falls and food becomes scarce, food prices will increase. This will affect the poor most since a larger proportion of their income will need to be spent on food. If people cannot afford to pay for food, this could result in malnutrition and starvation.
- For example, people in Sub-Saharan Africa and South Asia, the two poorest regions in the world, are most vulnerable to food insecurity due to climate change.

Impact on regulating ecosystem services

- As more countries in the world experience warmer temperatures, this creates more conducive environments for vectors such as mosquitoes and ticks to breed.
- Mosquitoes will also be able to migrate to higher latitudes to breed. This will increase the number of areas in the world that are at risk of vector-borne diseases. In turn, this can increase the incidences of vector-borne diseases, such as malaria, dengue fever and Zika, which are responsible for more than 700 000 deaths annually.
- Currently, most vector-borne diseases are usually located in the warmer latitudes, but it is expected that climate change will expose more people to these diseases. Studies predict that half of the world's population will be exposed to mosquito-borne diseases by 2050.
- An example of this can be seen in Bhutan, one of the coldest mountainous locations in the world. Prior to 2018, mosquitoes were non-existent in the mountainous regions of Bhutan as they could not breed in low temperatures. However, in 2019, Bhutan suffered the country's first national dengue epidemic where 19 out of the 20 districts of the country reported cases of the dengue virus.
- Hence, climate change affects regulating services provided by ecosystems by increasing the risk of vector-borne diseases. In turn, as more fall ill, this reduces the productivity level of the country as people are unable to work. The country may have to bear the added healthcare burden, and this may lead to reduced economic growth.

Impact on cultural ecosystem services

- Climate change can result in changes to natural landscapes, which affects the cultural services provided by ecosystems.
- In general, ecosystems provide people with the following cultural services: A sense of wellbeing, a sense of place, social cohesion, and recreational and tourism opportunities.
- However, when ecosystems are altered as a result of climate change, this will have an indirect impact on humans. For instance, climate change may destroy natural landscapes. This reduces people's desire to visit the places of attraction, thereby reducing tourism revenue for the country. Individuals working in tourism-related industries may also lose their livelihood.
- An example of how climate change has affected cultural ecosystem services is the melting of the Arctic ice, which has made the region more accessible to ships. This has led to an increase in tourism opportunities for tourists who may be drawn to the Arctic landscape. This means that the Arctic tourism industry will benefit by seeing an increase in economic returns.
- However, with the melting of the ice caps, the everyday cultural practices of the Arctic indigenous people are affected.
- For instance, traditional practices such as the storing of food in ice cellars are threatened due to the melting ice.
- Ice melting has contributed to a rapid decline in the number of sled dogs, which are typically used for travel and hunting.
- The melting of ice caps may also cause sea level rise, which threatens low-lying islands such as Maldives, which relies heavily on tourism as an economic driver. With rising sea levels, many parts of Maldives will become uninhabitable.
- Corals, which are a huge tourist attraction in Maldives, would also be affected by coral bleaching brought about by warmer oceans. This will eventually lead to a reduction in tourist revenue as fewer tourists visit the Maldives.

Level	Marks	Descriptors
3	7-9	- Develops arguments that support both sides of the discussion clearly using a range of points with some elaboration. Example(s) used demonstrate a comprehensive understanding of the issue or phenomenon. Evaluation is derived from a well-reasoned consideration of the arguments.
2	4-6	- Develops arguments that support one side of the discussion well using one or two points with some elaboration. Example(s) used demonstrate a good understanding of the issue or phenomenon. - Evaluation is well-supported by arguments. - Cap at 4-5m for arguments that support both sides of the discussion using one/two points with some elaboration and supported by example(s) which demonstrate a reasonable/appropriate understanding of the issue or phenomenon.
1	1-3	- Arguments are unclear with limited description or may be listed. No examples provided or examples are generic, demonstrating a basic understanding of the issue or phenomenon. Evaluation is simple, missing or unclear.
0	0	No creditworthy response.

A03

[Total: 15]

Assessment Specification Grid

Question	Max Mark	Question part	AO1	AO2	AO3
1	20	(a)(i)		1	
		(a)(ii)	1		
		(b)(i)		3	
		(b)(ii)			2
		(b)(iii)		2	
		(c)			4
		(d)(i)	2		
		(d)(ii)		3	
		(d)(iii)		2	
		Total	3	11	6
2	15	(a)(i)		3	
		(a)(ii)	3		
		(b)	3		
		(c)		3	
		(d)	3		
		Total	9	6	0
3	15	(a)		3	
		(b)	3		
		(c)			9
		Total	3	3	9

[Turn over]

AO1: $3 + 9 + 3 = 15$
 AO2: $11 + 6 + 3 = 20$
 AO3: $6 + 0 + 9 = 15$

Assessment Format (with reference to 2279 Geography GCE Ordinary Level Syllabus)	▪ 3 structured questions. ▪ No more than 9 sub-parts per question. ▪ Q1 is on fieldwork. ▪ One 9-mark OEQ in either Q2 or Q3.
Recommended Weighting of AO for Sec 4 Preliminary Examination (with reference to 2279 Geography GCE Ordinary Level Syllabus)	AO1: 15% AO2: 20% AO3: 15%

AO1: Knowledge with Understanding

Candidates should be able to construct responses based on understanding of theories, generalisations, models and concepts. This will be demonstrated by the ability to:

- (a) identify, describe or explain theories, generalisations, models, concepts and methods
- (b) classify environments, events, methods, objects, people, processes and places into categories according to their common features
- (c) explain how events, objects and processes cause changes to environments, people and places.

AO2: Skills and Analysis

Candidates should be able to apply their understanding to break down information into its component parts or to carry out an investigation. This will be demonstrated by the ability to:

- (a) support conclusions using relevant material from information provided
- (b) identify, describe or compare characteristics, relationships, patterns and trends shown in graphs, maps, photographs, diagrams, tables and texts
- (c) compare similarities and differences between environments, events, methods, objects, people, processes and places
- (d) describe or explain how to collect, process, interpret and present quantitative and qualitative data
- (e) adapt methods to manage risks, limitations and achieve investigation objectives.

AO3: Judgement and Decision-Making

Candidates should be able to use defined criteria and standards to evaluate methods, outcomes and proposals. This will be demonstrated by the ability to:

- (a) arrive at an overall evaluation by considering constraints and opportunities in the environment, people's varying needs, attitudes and beliefs, or the importance of sustainable development
- (b) evaluate the reliability and validity of investigation findings.