Assessment Schedule – 2020

Geography: Apply concepts and basic geographic skills to demonstrate understanding of a given environment (91010)

Assessment Criteria

Achievement	Achievement with Merit	Achievement with Excellence
Applying concepts and basic geographic skills to demonstrate understanding of a given environment involves: • using basic skills and geographic conventions in the presentation and / or interpretation of information (**B**) • showing **understanding** of geography concepts (**U**).	*Applying concepts and basic geographic skills to demonstrate in-depth understanding of a given environment* involves: • using basic skills and geographic conventions **with precision** in the presentation and / or interpretation of information (**P**) • showing an **in-depth understanding** of geography concepts (**D**).	*Applying concepts and geographic skills to demonstrate comprehensive understanding of a given environment* involves: • using basic skills and geographic conventions **with consistent precision** in the presentation and / or interpretation of information • showing a **full understanding** of geography concepts **using geographic terminology** and **showing insight** (**C**).

Cut Scores

Not Achieved	Achievement	Achievement with Merit	Achievement with Excellence
0 – 2	3 – 4	5 – 6	7 – 8

Evidence

Q	Evidence	Achievement	Achievement with Merit	Achievement with Excellence
(a)	Identifies two reasons why scientists do not carry out research in winter: • 24-hour darkness • Cold temperatures	**(B)** Two reasons identified.		
(b)	Fully describes the location of Hut Point Peninsula. See Appendix A.	**(U)** Shows an **understanding** of the concept of location.	**(D)** Shows an **in-depth understanding** of the concept of location, using specific supporting evidence.	**(C)** Shows a **comprehensive understanding** of the concept of location, integrating specific supporting evidence and geographic terminology, with insight.
(c)	Identifies three natural and three cultural features of Hut Point Peninsula. Natural features include: • Crater Hill • Fortress Rocks • Cliffs • Observation Hill Cultural features include: • Scott Base • Wind turbines • Memorial Cross • McMurdo Station	**(B)** Identifies FOUR features to show an understanding of the natural and cultural features of the environment.	**(P)** Identifies SIX features to show an understanding of the natural and cultural features of the environment.	

Q	Evidence	Achievement	Achievement with Merit	Achievement with Excellence
(d)	On the précis map, locates and labels the following areas: • Scott Base • Wind farm • Road connecting Scott Base to Hut Point *See **Appendix B**.* *This task is marked in two separate parts. **Conventions** (in terms of presentation) AND **accuracy** (in terms of interpretation of the resources). The two marks are not dependent on each other.*	**(B)** Uses **basic conventions** to show an **understanding** of the environment. • Title • Arrow (North) • Scale • Key *Allow for some inaccuracy, error, or omission.*	**(P)** Uses **conventions with precision** to show a **clear understanding** of the environment.	
		(B) Locates features, showing an **understanding** of the environment. *Allow for some inaccuracy, error, or omission.*	**(P)** Locates features **with precision,** showing a **clear understanding** of the environment. *Allow for minor inaccuracy.*	
(e) (i)	Contour interval is 20m.	**(B)** ONE correct.	**(P)** TWO correct.	
(ii)	Circles the correct response: • The relief gets steeper as altitude increases			
(f) (i) (ii) (iii)	Identifies: • Direction from Scott Base to McMurdo Station: West • Type of road that connects Scott Base to McMurdo Station: Metalled • Number of diesel tanks: 4	**(B)** TWO correct.	**(P)** THREE correct.	

Q	Evidence	Achievement	Achievement with Merit	Achievement with Excellence
(g)	Completes the diagram to show the months that the wind farm can operate (using average wind speeds). *See **Appendix C**.* *This task is marked in two separate parts. **Conventions** (in terms of presentation) AND **accuracy** (in terms of interpretation of the resources). The two marks are not dependent on each other.*	**(B)** Uses **basic conventions** to show an **understanding** of the environment. • Title • Appropriate shading technique • Labels • Key *Allow for some inaccuracy, error, or omission.* **(B)** Completes diagram to show an understanding of the environment. *Allow for some inaccuracy, error, or omission.*	**(P)** Uses **conventions with precision** to show a **clear understanding** of the environment. *Allow for minor inaccuracy.* **(P)** Completes diagram **with precision** to show an understanding of the environment.	
(h)	Explains why the Antarctic environment is suited to wind farms. See Appendix D.	**(U)** Shows an **understanding** of the concept of <u>environments</u>.	**(D)** Shows an **in-depth understanding** of the concept of <u>environments</u>, using specific supporting evidence.	**(C)** Shows a **comprehensive understanding** of the concept of <u>environments</u>, integrating specific supporting evidence and geographic terminology, with insight.
(i)	Explains how the sustainability of Hut Point Peninsula will be maintained. See Appendix E.	**(U)** Shows an **understanding** of the concept of <u>sustainability</u>.	**(SD)** Shows an **in-depth understanding** of the concept of <u>sustainability</u>, using specific supporting evidence.	**(SC)** Shows a **comprehensive understanding** of the concept of <u>sustainability</u>, integrating specific supporting evidence and geographic terminology, with insight, consistently throughout.

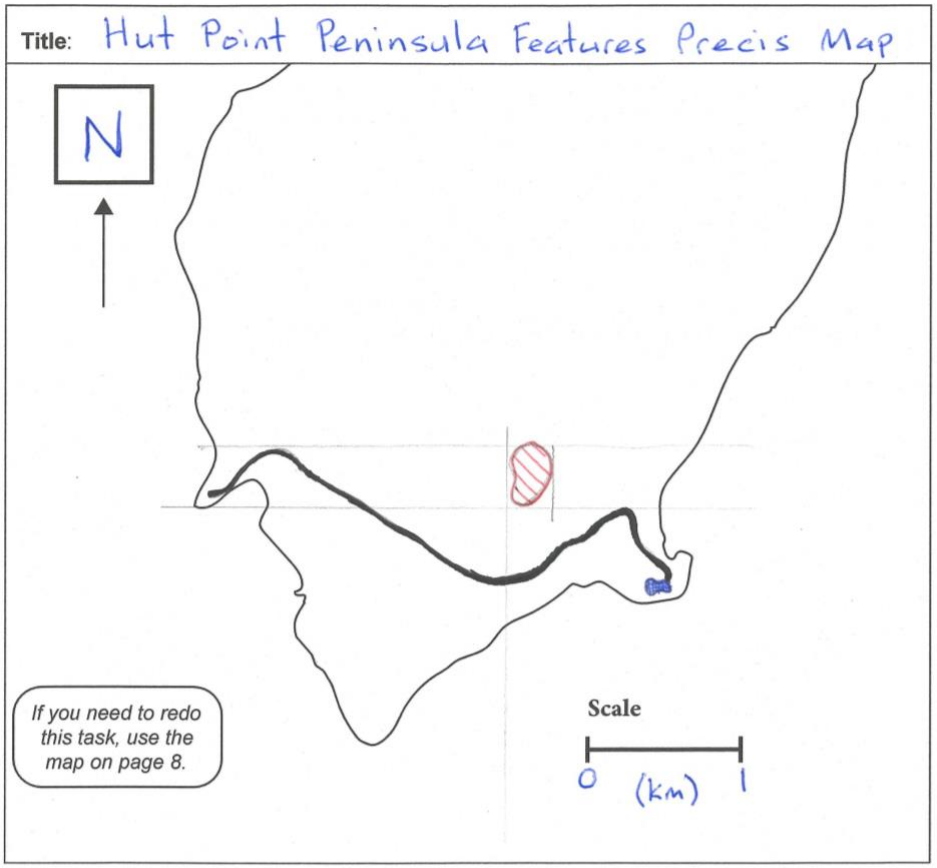
N1	N2	A3	A4	M5	M6	E7	E8
2**B** or 1**U** A limited use of basic skills and geographic conventions in the presentation of information. *OR* Shows **some understanding** of ONE of the geographic concepts of: • location • environments • sustainability.	2**B** + 1**U** A limited use of basic skills and geographic conventions in the presentation of information. *AND* Shows **some understanding** of ONE of the geographic concepts of: • location • environments • sustainability.	3**B** + 2**U** Uses basic skills and geographic conventions in the presentation of information, in most instances. *AND* Shows an **understanding** of TWO of the geographic concepts of: • location • environments • sustainability. Makes a general reference to the Hut Point Peninsula environment.	4**B** + 2**U** Uses basic skills and geographic conventions in the presentation of information. *AND* Shows an **understanding** of TWO of the geographic concepts of: • location • environments • sustainability. Uses **some** supporting evidence.	2**B** + 2**P + 2D** Uses basic skills and geographic conventions **with precision** in the presentation of information. *AND* Shows an **in-depth understanding** of TWO of the geographic concepts of: • location • environments • sustainability. Uses **some detailed** supporting evidence.	2**B** + 3**P +**2**D** **+** 1**SD** Uses basic skills and geographic conventions **with precision** in the presentation of information. *AND* Shows an **in-depth understanding** of TWO of the geographic concepts (one of which MUST be sustainability) of: • location • environments • sustainability. Uses **a range of detailed** supporting evidence.	2**B** + 3**P** + 2**C** Uses geographic conventions **with consistent precision** in most instances. *AND* Shows a **comprehensive understanding** of TWO of the geographic concepts of: • location • environments • sustainability. Integrates **a range of detailed** supporting evidence and **geographic terminology, with insight**.	2**B** + 4**P** + 1**C** + 1S**C** Uses geographic conventions **with consistent precision**. *AND* Shows a **comprehensive understanding** of TWO of the geographic concepts (one of which MUST be sustainability) of: • location • environments • sustainability. Integrates a **wide range of detailed** supporting evidence and **geographic terminology, with insight, consistently throughout**.

N0 = No response; no relevant evidence.

Appendix A: Location of Hut Point Peninsula

U	D	C
Hut Point Peninsula is found in Antarctica on an island called Ross Island.	Hut Point Peninsula is located south of New Zealand in Antarctica. It is found at the southern end of Ross Island, which is in the Ross Sea.	EITHER Hut Point Peninsula is located at latitude 78°S and longitude 165°E (accept minor variance) OR Hut Point Peninsula is located in Antarctica in the southern hemisphere. Relative to New Zealand, it is directly south, in an area called the Ross Dependency. Here it sits at the southern tip of Ross Island, which borders the Ross Sea and the Ross Ice Shelf.

Appendix B: Précis map

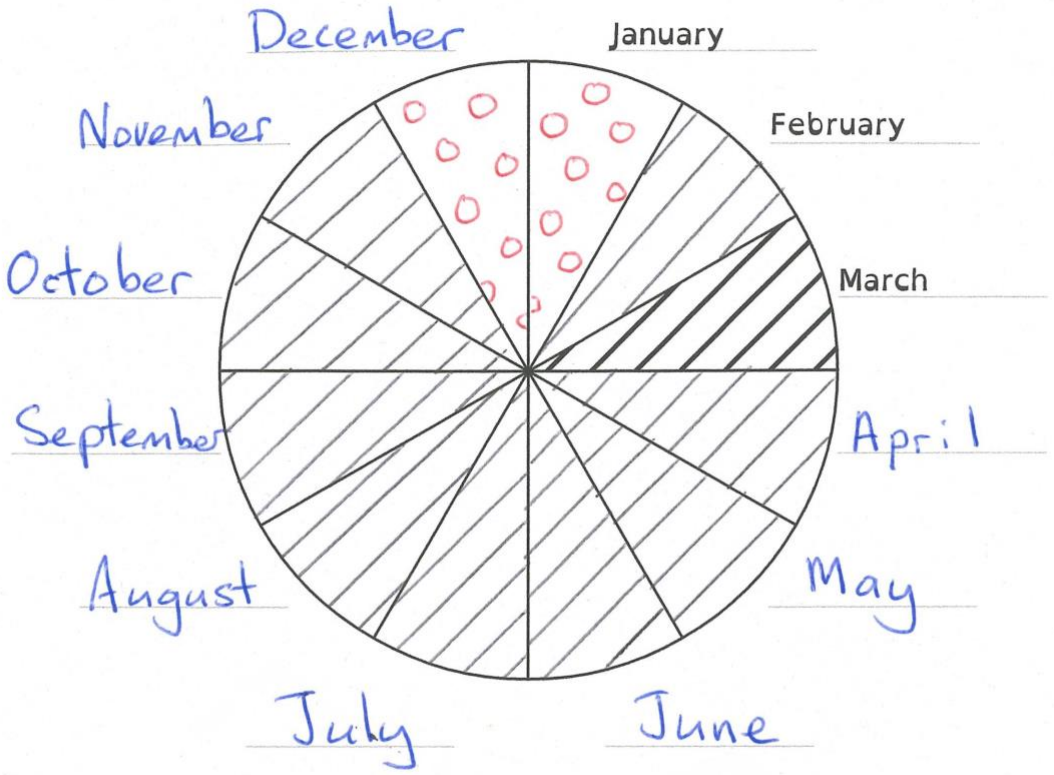


Key

Scott Base	
Wind farm	
Road from Scott Base to Hut Point	

Appendix C: Wind diagram

Title: Average Monthly Wind Speed Above & Below Wind Turbine Operation Speed 2018



Key

Monthly average wind speed is **above** operation speed

Monthly average wind speed is **below** operation speed

Appendix D: Why Antarctica is suited to wind power

U	D	C
Antarctica is suited for wind power because most of the months have a wind speed that will operate the wind turbines. This means it can get power for most of the year using wind.	The environment of Antarctica is suited to wind power because of its wind speed. The wind farm near Scott base can only generate power when the wind speed is greater than 4 m s^{-1}. Wind speeds at Scott Base exceed 4 m s^{-1} 10 months of the year. This means Scott Base is able to use wind to generate power for a large part of the year.	The environment of Antarctica is suited to wind power because of the natural characteristic of wind speed. The 3 wind turbines near Scott base can only generate power when the wind speed is greater than 4 m s^{-1}. Wind speeds at Scott Base exceed 4 m s^{-1} 10 months of the year (February through to November). There are many elevated areas near Scott Base, so wind speed will not be affected by obstacles. This means Scott Base is able to use wind to generate power for a large part of the year.

Appendix E: Sustainability

U	D	C
The redevelopment of Scott Base will help Antarctica NZ to be sustainable. The new buildings will stop the effects of wind and snowdrift. The present buildings are old, and maintenance is an ongoing problem. Waste will be returned to NZ and water will be treated before it is returned to the ocean.	The redevelopment of Scott Base will help Antarctica NZ to improve its sustainability. The base has been designed to take into account the cold climate. By elevating the buildings and making them a curved shape, the effects of wind and snowdrift will decrease the need for maintenance in the future. The present buildings date back to the 1970s, and maintenance is an ongoing problem. Waste will be returned to NZ for incineration and water will be treated before it is returned to the ocean, which will decrease pollution.	The redevelopment of Scott Base will help Antarctica NZ to improve its sustainability in the future. The base has been designed to take into account the cold climate and limit its effects. By elevating the buildings and making them a curved shape the effects of 180 kph winds and snowdrift will be reduced and decrease the need for maintenance. The present buildings date back to the 1970's and maintenance is an ongoing problem that needs to be minimised. The new base will also limit damage to the natural environment. Waste will be returned to NZ for incineration and water will be treated before it is returned to the ocean. Finally, more scientists will be able to travel to Scott Base. The new base will also enable NZ to maintain its relationship with the USA McMurdo Station. This will enable the two bases to continue to share resources and carry out research well into the future.