

Assessment Schedule – 2006

Geography: Explain a natural landscape (90331)

Evidence Statement

Question	Evidence	Achievement	Merit	Excellence
<p>ONE</p>	<p>(a) One land-building process or a combination of processes is selected and explanation of the formation of the continental landscape over time is given.</p> <p>(b) One land-modifying process or a combination of processes is selected and explanation of the modification of the continental landscape over time is given.</p> <p>Note:</p> <ul style="list-style-type: none"> Allow some crossover between land-building and land-modifying processes in the answers to 1(a) and 1(b). It is difficult to deal with each in total isolation. Do not penalise candidates who state ONE process will be examined but explain two or more. It is often difficult to separate the processes, especially for land-building. 	<p>One process or a combination of processes is selected and the explanation and/or sketches, etc, show some understanding of the process of formation OR modification of the continental landscape. Change over time must be implied or stated.</p> <p>Some case study material is included.</p> <p>Ep, C</p>	<p>Depth OR Breadth</p> <p>Depth One process or combination of processes is selected and the explanation and/or sketches, etc, show an in-depth understanding of the process of formation OR modification of the continental landscape. Change over time must be implied or stated.</p> <p>Detailed case study material is included.</p> <p>Ed, Cd</p> <p>OR</p> <p>Breadth Two processes or combination of processes are selected and the explanation and / or sketches, etc, shows some understanding of the processes of formation AND modification of the continental landscape. Change over time must be implied or stated.</p> <p>Some case study material is included for both processes.</p> <p>Ep, Ep, C, C</p>	<p>Depth AND Breadth</p> <p>Two processes or combination of processes are selected and the explanation and/or sketches, etc, show an in-depth understanding of the processes of formation AND modification of the continental landscape. Change over time must be implied or stated.</p> <p>Detailed case study material is included for both processes.</p> <p>Ed, Ed, Cd, Cd</p> <p><i>See Appendix for sample answer.</i></p>

Question	Evidence	Achievement	Merit	Excellence
TWO	<p>Selects ONE group of people whose activities have affected the continental landscape and explains how their cultural perspective has affected their use of the landscape.</p> <p>Note: The importance is not the name given to the cultural perspective, but rather the explanation of how it affects the use of the land.</p>	<p>ONE group selected and the explanation shows some understanding of how their cultural perspective has affected their use of the land.</p> <p>Some case study material included.</p> <p>Ep, C</p>	<p>ONE group selected and the explanation shows an in-depth understanding of how their cultural perspective has affected their use of the land.</p> <p>Detailed case study material included.</p> <p>Ed, Cd</p> <p><i>See Appendix for sample answer.</i></p>	
THREE	<p>Selects TWO natural features and explains how AND why they vary within the New Zealand landscape.</p>	<p>ONE feature is selected and the explanation and / or sketches, etc, partially explains how AND why the feature varies within the New Zealand landscape.</p> <p>Some case study material is included.</p> <p>Ep, C</p>	<p>Depth OR Breadth</p> <p>Depth ONE feature is selected and the explanation and / or sketches, etc, explains in depth how AND why the feature varies within the New Zealand landscape.</p> <p>Detailed case study material is included.</p> <p>Ed, Cd</p> <p>OR</p> <p>Breadth TWO features are selected and the explanations and / or sketches, etc, partially explain how AND why each feature varies within the New Zealand landscape.</p> <p>Some case study material is included for each feature.</p> <p>Ep Ep C, C</p>	<p>Depth AND Breadth</p> <p>TWO features are selected and the explanations and / or sketches, etc, explain in depth how AND why each feature varies within the New Zealand landscape.</p> <p>Detailed case study material is included for each feature.</p> <p>Ed, Ed, Cd, Cd.</p> <p><i>See Appendix for sample answer.</i></p>

Judgement Statement

Achievement	Achievement with Merit	Achievement with Excellence
<p>2 × A or 1 × M or 1 × E</p>	<p>2 × M (one must be Q3) or 2 × M and 1 × A or 1 × M and 2 × A</p>	<p>1 × E, 1 × M and 1 × A</p>

APPENDIX

QUESTION ONE – Example of an Excellence answer.

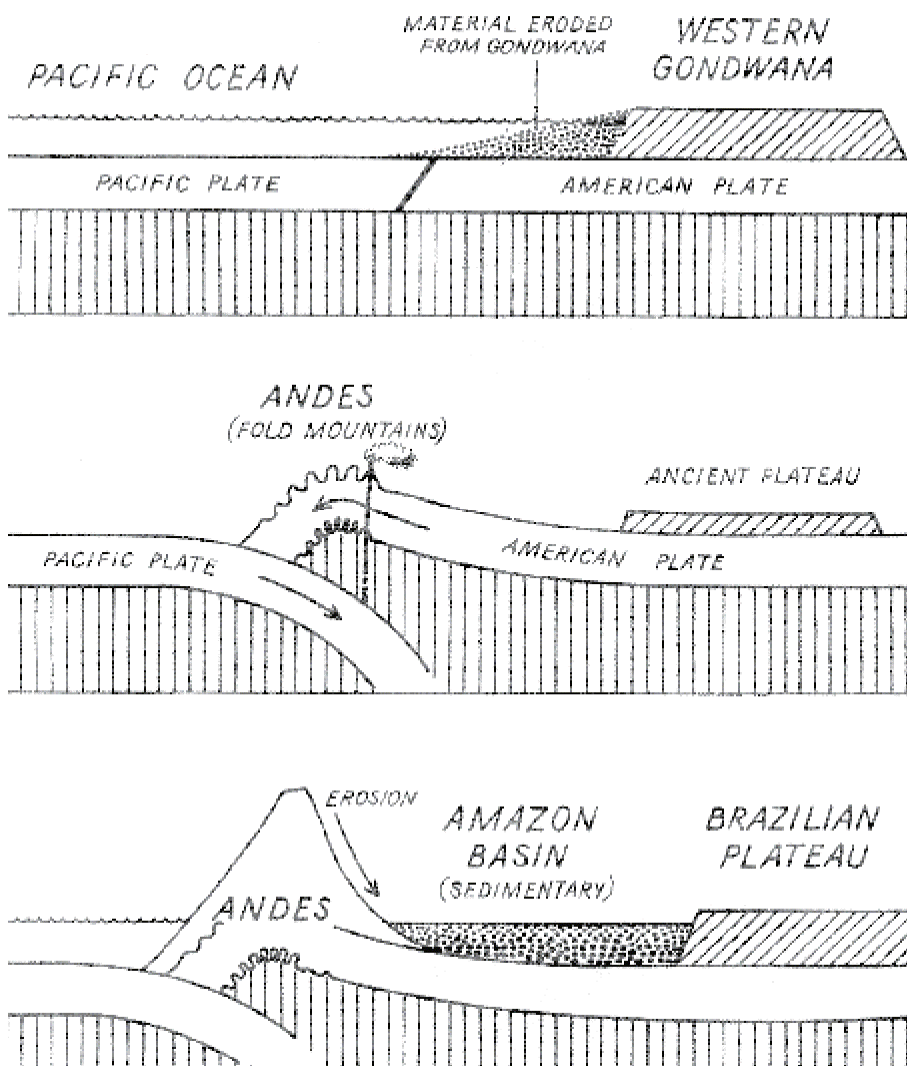
TWO processes are explained in depth with detailed case study material.

(a) Land-building process – Plate tectonics / Folding in the Amazon Basin

The Earth's crust is constantly destroying and re-creating itself. The mechanism causing this is plate tectonics. The Earth's crust is made up of a series of plates that are constantly on the move at different rates, ranging from a few centimetres every year to metres in some places. Convection currents of magma originating in the Earth's mantle push the plates apart or together. The Amazon Basin was formed as a result of these plate movements.

The Amazon basin has been formed over the last 250 million years as Gondwanaland, the great southern continent, began to split up. The South American continent moved away from Africa as the mid-Atlantic ridge widened. As it moved westward, it collided with the Pacific and Nazca plates, resulting in the formation of the Andes Mountains by folding. The uplift that created the Andes is still occurring and because of the height of the Andes, erosion processes are very active there. Material from the mountains has been deposited in the basin in between the Andes to the west and the ancient Brazilian Shield or Plateau to the east.

Possible diagram:

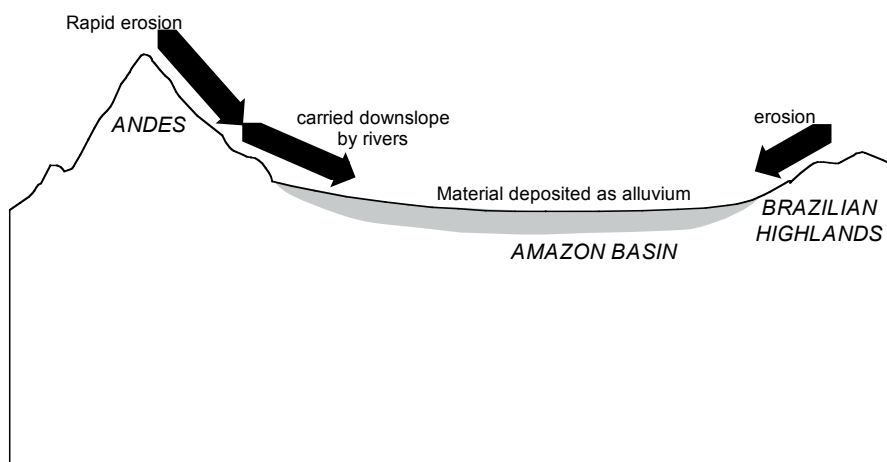


(b) Land-modifying process – Transportation/ Deposition by rivers in the Amazon Basin

The white water tributaries of the Amazon River all have their origin in the Andes Mountains. They carry large amounts of sediments because the Andes is still rising rapidly and being eroded by ice and running water. Every year in the rainy season, the rivers carry huge amounts of alluvial material from the Andes when floods occur. The rivers can rise 16–20 metres above their usual levels. When the rivers hit the flood plain, their speed is reduced and they are not able to transport the sediments. The material they transport is deposited on the flood plain. In Brazil, the flood plain is known as the varzea. Every year the varzea can gain up to 8 tonnes of sediment in this way. Some of the white water tributaries are the Rio Madeira and the Jura.

Rivers that flow from the ancient shield carry tiny amounts of sediment because the shield is no longer rising or being eroded much. Flooding is much less common but does lead to some material being deposited in the Amazon basin. The rivers are called clear water tributaries, and examples are the Xinju and Tapajos.

Possible diagram:



QUESTION TWO – Example of a Merit answer.

A group of people and their use of the landscape are explained in depth, with detailed case study material.

The **indigenous** Indian tribes of the Amazon Rainforest have learned how to work with the hot, wet climate, the dense forest, and the infertile soils to support themselves. In particular, they have learned to adapt to the low natural soil fertility of the terra firma or ancient shields. A form of subsistence agriculture has been developed over the centuries they have lived in the forest, which allows them to use the land in a sustainable way without damaging the environment.

Shifting cultivation is the traditional use of the forest practiced by indigenous tribes such as the Yanomani and Boro. Having made a clearing or swidden in the forest, the trees are burnt and crops sown in the ashes. The ash increases the soil fertility, but this deteriorates quickly and after three seasons the land must be abandoned. Another site is chosen and the process repeated. After about five years, it is almost impossible to tell where the forest has been disturbed because re-growth is so quick. But it is not for another 25–30 years that the land can be used again. The Indians supplement their food from the clearing by hunting and gathering. When they have to travel a long way for game, they know the time has come to move on. This is usually at the same time that soil fertility declines.

In the long term, the Indians' use of the rainforest has minimal or no impact because resources are never used to the point of exhaustion and the resources are allowed to recover.

QUESTION THREE – An example of an Excellence answer.

The variations of two natural features are explained in depth with detailed case study material.

Vegetation

The Tongariro Volcanic Centre shows spatial variations in the location of various types of vegetation. The predominant vegetation on the northern, eastern, and western slopes up to 1250 metres in the region is tussock grassland. To the south of Mt Ruapehu at lower altitudes, there is lowland mixed podocarp and beech forests. Undisturbed, the whole region should have shown a similar pattern to that of the south. The major reason for this variation in vegetation is volcanic activity. The Taupo eruption of 186 AD had a significant effect on vegetation. This enormous eruption destroyed much of the beech forest in the area as a result of a pyroclastic flow that burnt the forests in its path. The height of Mt Ruapehu sheltered the southern area from this flow, and its mature vegetation remained intact. The tussock grassland that is present in the other areas represents an early stage in plant succession.

Soil

Soils in the Tongariro Volcanic Centre have been influenced by volcanic activity but also wind direction. Soils in the area have developed mainly as a result of volcanic eruption and the deposition of tephra or ash. The older the ash, the longer the time for the soil to develop.

In the north, the soils are quite recent, being formed by recent eruptions of ash from Ngauruhoe and Ruapehu and pumice from Taupo. Underneath is the much older Tongariro ash, which dates to between 1800–14 000 years ago. The recent ash produces coarse-textured light soils.

To the south of Mt Ruapehu lie soils developed solely on Tongariro ash. These soils have been eroded and weathered over time to form deep, fine-textured loam soils. This area has not been affected by ash from more recent eruptions, such as Mt Ruapehu in 1995 and 1996, because the prevailing westerly winds do not carry material in this direction.