Exemplar for Internal Achievement Standard

Geography Level 1

This exemplar supports assessment against:

Achievement Standard 91013

Describe aspects of a geographic topic at a global scale

An annotated exemplar is an extract of student evidence, with a commentary, to explain key aspects of the standard. These will assist teachers to make assessment judgements at the grade boundaries.

New Zealand Qualification Authority
To support internal assessment from 2014
<table>
<thead>
<tr>
<th>Grade Boundary: Low Excellence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. For Excellence the student needs to comprehensively describe aspects of a geographic topic at a global scale. This typically involves fully describing the:</td>
</tr>
<tr>
<td>• pattern</td>
</tr>
<tr>
<td>• factors and/or processes that caused or contributed to the pattern</td>
</tr>
<tr>
<td>• significance of the topic to people’s lives.</td>
</tr>
<tr>
<td>The student demonstrates Excellence through full descriptions with effective use of geographic terminology and global evidence about the world’s deserts.</td>
</tr>
<tr>
<td>A spatial pattern is clearly and accurately identified using appropriate geographic terminology (1) and extensive global evidence. The full description is supported with an annotated map. Insight is evident when the student identifies subtle differences within the selected pattern (2) (3).</td>
</tr>
<tr>
<td>Air pressure and ocean currents are fully described as causing the spatial pattern of deserts. The link is directly made between these two factors and the linear pattern, showing understanding of the causal relationship (4) (6). Geographic terminology is effectively incorporated when describing climatic processes (5) and a supporting diagram is used.</td>
</tr>
<tr>
<td>The significance of the topic to people’s lives is fully described with a range of situations and supporting global evidence (7).</td>
</tr>
<tr>
<td>To reach Excellence more securely, the student could make more explicit use of geographic concepts such as ‘interaction’ or ‘processes’. When fully describing the significance of the topic to people’s lives, reference to the oil reserves needs to be directly linked to people’s lives (8).</td>
</tr>
</tbody>
</table>
Global pattern

Most of the world's deserts are found in a linear pattern which is mostly between 25° - 30° latitude North and South of the Equator [1]. North of the Equator has the most areas of desert with a major concentration including the Sahara Desert in Africa and the Arabian Desert in Saudi Arabia. The linear pattern spreads east from the Sahara, through the Arabian Peninsula deserts and over to the Thar Desert in India. This line closely follows the Tropic of Cancer. This line or strip can include deserts in China like the Taklamakan and Gobi but this part of the line has gaps so is not so clear [2]. Across the Pacific Ocean the line of deserts continues with the Mojave and Great Basin Deserts.

To the south of the equator, there is linear pattern through Southern Africa, Australia, Chile and Argentina…

The linear pattern also shows more desert areas on the western coasts of continents like down the western side of North and South America, but this is not a continuous line [3]…

An annotated map supported the description.

Factors and/or processes

Climate is the main factor that has caused the linear pattern of deserts.

The linear pattern follows the Tropics of Capricorn and Cancer and this clearly shows a link to climate patterns [4]. At the Tropics there are belts of high pressure air cells and these do not cause rain. Air is descending in the high pressure cells which are mainly a time of evaporation not precipitation. This process in the high pressure cell would quickly remove any moisture that was in the area like coastal fog which is common in the Atacama and Namib deserts, and this makes these areas even drier [5]. The Sahara in northern Africa and the central Australian desert areas have almost permanent high pressure systems over them…
The coastal deserts are formed because of cold ocean currents which … This is the case on the west coast of Africa. The Namib Desert is caused by the Benguela Current from the South Atlantic and in South America … This factor causes many deserts to occur on the western coasts of continents and why line can be seen stretching down the west coast of North and South America… [6]

**Significance to people’s lives**

Most of the desert areas are unsuitable for people to live in permanently. Some tribes have adapted to a subsistence/nomadic way of life, but most desert areas have very low population densities.

Indigenous tribes have adapted to living in the desert and have done so for generations. In the Sahara desert the Tuareg have adopted certain strategies to survive. They live as a tribe in groups of 30-100 people and they are constantly searching for water and food. They graze camels and goats… Traditionally they follow the trade routes of the Sahara with their camel caravans to the markets trading in goods and animals. These trade routes have declined and many now live in fertile areas near to oases and raise cereal crops, like maize, and use camel dung as fuel for cooking and heating instead of being nomadic. [7]. However, they still use camels as transport to travel huge distances across the desert…

In America, people use modern technology to create a tourist and resort area in the desert. Las Vegas has a booming community… The development of air conditioning has made it possible for people to live in the desert… often people migrate to the warm, dry desert for the winter and return to the east coast in the spring [7].

The Arabian Desert is significant for people’s lives as it has over 80% of the world’s oil reserves and includes the countries of Saudi Arabia… All of these countries have oil refineries and have benefited from the extraction of oil from the desert [8].
For Merit the student needs to describe, in depth, aspects of a geographic topic at a global scale.
This typically involves describing, in detail, the:

- pattern
- factors and/or processes that caused or contributed to the pattern
- significance of the topic to people's lives.

The student evidence for the first two aspects has been used.

The student demonstrates an ability to describe aspects of the geographic topic (deserts) in depth, through the use of detailed evidence and some relevant geographic terminology.

A spatial pattern is clearly and accurately identified using appropriate geographic terminology (1). The description of the spatial pattern is supported with an annotated map clearly showing the global spatial dimension (2).

Air pressure cells are directly identified as causes of the linear pattern (3). The description contains details of related processes and desert formation (4), while maintaining the link to the spatial pattern.

To reach Excellence the student would need to incorporate geographic concepts into the descriptions. The description of ocean currents would also need to have more explicit links to the identified linear spatial pattern, rather than emphasis on specific desert locations (5). More direct reference to the map showing a linear pattern of coastal deserts would result in a more convincing response.
Spatial pattern

Most of the world’s deserts are found in linear patterns around the tropics, that is latitude 25°-30° N and S of the equator [1]. There is also a linear pattern along the west coast of…

North of the Equator the biggest desert is the Sahara. The Sahara Desert, the Arabian and Thar Deserts form a linear pattern which is near the Tropic of Cancer...

Deserts are also shown on the west coast of some continents this is a peripheral pattern which is also a line.

There is a cluster of deserts in Asia including the Kara Kum Desert extending from…

South of the Equator the biggest desert is in Australia …there is clearly a line from South America through southern Africa…this line follows the Tropic of Capricorn.

Factors and/or processes

Climate is the main influence for the location of the desert and the linear pattern.

The linear pattern of deserts is largely because of air pressure cells in the atmosphere. The belt of high pressure cells clearly matches up with the two linear patterns shown for deserts which are near the Tropics of Cancer and Capricorn [3]. The climate characteristics of a high pressure … low rainfall and … High pressure cells are descending dry air. As the air
descends it gets warmer and tends to evaporate moisture from the earth’s surface. It brings bringing dry sunny weather. Some deserts have as little as 1mm of rain a year and other parts have no rain for years… [4] These large high pressure cells are the main influence over the desert climates… The temperatures in the tropical deserts (Sahara) are high all year round (35-45ºC) with extreme differences in temperatures between day and night...

Some of the deserts in the southern linear pattern border the west coast. The deserts of Atacama and the Namib are both caused by cold ocean currents... Cold sea temperatures mean there is no evaporation …no rainfall for the coastal land. The Benguela is a cold current from the Antarctic Ocean and it has contributed to the Namib Desert in Southern Africa [5]… Fog is the most common form of moisture and the coastal area can receive as little as 2-20mm of rain per year… but due to high evaporation…
<table>
<thead>
<tr>
<th>Grade Boundary: Low Merit</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. For Merit the student needs to describe, in depth, aspects of a geographic topic at a global scale.</td>
</tr>
<tr>
<td>This typically involves describing, in detail, the:</td>
</tr>
<tr>
<td>- pattern</td>
</tr>
<tr>
<td>- factors and/or processes that caused or contributed to the pattern</td>
</tr>
<tr>
<td>- significance of the topic to people's lives.</td>
</tr>
<tr>
<td>The student evidence for the second two aspects has been used.</td>
</tr>
<tr>
<td>The student demonstrates in depth understanding of most aspects of the topic (deserts), through the use of specific evidence and some relevant geographic terminology.</td>
</tr>
<tr>
<td>Linear patterns in the Southern and Northern Hemispheres were described in detail.</td>
</tr>
<tr>
<td>Air pressure and relief are both described as contributing to the linear spatial pattern.</td>
</tr>
<tr>
<td>The Southern linear pattern and air pressure systems are clearly linked (1). Relief is described in detail as contributing to both ends of the Northern linear pattern, as it creates a rain shadow effect (3). The process of orographic rain is described and appropriate global evidence is used (4).</td>
</tr>
<tr>
<td>The significance of the topic to people's lives is described with some detail for indigenous people (5).</td>
</tr>
<tr>
<td>To reach Merit more securely, the student would need to include geographic detail when describing air pressure as a cause of the linear pattern (2), specifically with a focus on precipitation. When describing the significance of the topic to people's lives, large tribal groups indicate global evidence, but this could be more explicit and include a wider global perspective.</td>
</tr>
<tr>
<td>Global evidence needs to be used when describing each aspect.</td>
</tr>
</tbody>
</table>
Student 3 Low Merit

Factors and/or processes

The linear pattern including the deserts of Southern Africa, Australia, Chile and Argentina relates closely to the belt of high pressure systems shown on the climate map [1]. The sun heats the earth more at the equator than the poles and this creates areas of different air pressure. High pressure cells cover the Tropics for most of the year… [2]. The temperatures in the desert (Sahara, Sonoran) are high all year round (35-45°C), with hot temperatures in the day and cold temperatures at night…

Relief creates rain shadow effects with orographic rain leaving dry winds to flow over desert areas. This is a major factor causing the large inland deserts in Central Asia and also the Sahara, so it affects both ends of this northern line [3]. The Atlas Mountains block any moisture laden winds from getting into the Sahara from the north. Orographic rain occurs when air cools as it rises to get over the mountains, the air condenses and it rains. This same process occurs in North America with the Rocky Mountains and Sierra Nevada…Himalayas and Gobi… [4]

Significance to people’s lives

People who traditionally live in the desert have adapted their whole way of live to survive. Most people like the Bedouin and Tuareg live in tribes and follow a nomadic way of life. They are always searching for water and they will only live in an area for a short time, then move on to where there is more water and grazing…or wild game… Living in the desert influences their diet, clothing, shelter… [5]

Ancient civilisations mostly lived by an oasis as the desert was too hard to survive in. Tribes like the Bedouin… Their culture is nomadic so they can move when the water runs out. The Bedouin live in tents with thick canvas walls to keep out the dust and sand… The tents can be easily moved on camels when they move to the next location. Tents have been used to protect animals (goats, sheep) from sand storms [5].

Some desert people e.g. the San, rely on desert vegetation like desert melons and plant roots for water while others dig tunnels… [5]
Grade Boundary: High Achieved

4. For Achieved, the student needs to describe aspects of a geographic topic at a global scale. This typically involves describing the:
   - pattern
   - factors and/or processes that caused or contributed to the pattern
   - significance of the topic to people's lives.

The student evidence for the first two aspects has been used.

The student demonstrates some depth in their descriptions through the use of detailed evidence about deserts, for example specific latitudes and use of geographic terminology.

A map is used to illustrate the linear spatial pattern of deserts (1) and includes the ocean currents described as contributing to this pattern. The spatial pattern is briefly and accurately described, with relevant global evidence (2).

The description of ocean currents and air pressure are directly linked to the pattern (4 and 7). The processes for cold ocean currents are described in relation to desert formation (5).

To reach Merit the student would need to use more detail in their descriptions. This is beginning to occur with the description of the spatial pattern when reference is made to deserts on the western coasts (3) and named cold ocean currents (6). More geographical detail needs to be evident in the descriptions of both ocean currents and air pressure systems, specifically how they create and conditions. More global evidence could be included in the air pressure description (7).
Global pattern

The largest sub-tropical deserts occur along the 25°-30°N latitude, in the Northern Hemisphere, e.g. Sonoran, Sahara, Arabian and Thar Deserts. This is a linear pattern. There is also a linear pattern in the Southern Hemisphere which goes through Chile, Argentina, Southern Africa, and Australia following the 25°-30°S latitude [2]. In South America and Africa deserts appear concentrated on the west coast e.g. Atacama and Namib Deserts...even in Australia the east coast has no deserts [3].

Factors and/or processes

Cold ocean currents cause the deserts on the west coast of continents. Two coastal deserts the Atacama (Chile) and Namib (Namibia) are parts of the Southern Hemisphere linear pattern [4]... The sea temperatures are too cold for evaporation and so the air stays quite dry meaning no rain [5]... The land stays dry and desert like... The Benguela Current flows up the west coast of Africa creating severe desert conditions on this coast. In South America the Peru Current has the same effect and the West Australia Current brings cold water up the west coast of Australia [6].

High pressure cells also contribute to forming this line of deserts in the Southern Hemisphere [7]. Around the Tropic of Capricorn is a high pressure belt that covers the main deserts in this line. Dry weather is a characteristic of high pressure and if they are over the area for a long time there is a water shortage. If low pressure cells moved in this area they would bring rain and end the desert conditions.
<table>
<thead>
<tr>
<th>Grade Boundary: Low Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>5.</strong> For Achieved, the student needs to describe aspects of a geographic topic at a global scale. This typically involves describing, the:</td>
</tr>
<tr>
<td>• pattern</td>
</tr>
<tr>
<td>• factors and/or processes that caused or contributed to the pattern</td>
</tr>
<tr>
<td>• significance of the topic to people’s lives.</td>
</tr>
</tbody>
</table>

The student demonstrates understanding of the geographic topic (deserts) through simple descriptive responses including global evidence for the second and third aspects.

Two spatial patterns are identified (2) (4) and supported with a map (1). The description of air pressure systems demonstrates understanding of the link between climate and a linear pattern of deserts (4) (5).

The description of the significance of deserts for people’s lives includes global evidence and focuses on the indigenous inhabitants and their need to secure a water supply (7).

To reach Achieved more securely, the student would need to describe one spatial pattern more clearly and describe the causes for this pattern. The response to the first aspect needs to emphasise the scattered pattern rather than the location of major deserts (3). The student evidence should demonstrate clear understanding of the distinction between ‘pattern’ and ‘location’, which is particularly important with this standard.

The description of cold ocean currents needs to describe more explicitly how they contribute to the spatial pattern (6). Wider global evidence could be used in the descriptions.
Deserts are scattered across the globe with a desert area in most continents. The major southern deserts are the Atacama, Namib, Kalahari and the Great Sandy Desert. They are all near the Tropic of Capricorn. The northern deserts are…

Factors and/or processes

Most of the world's deserts are in lines near the Tropics 20-30° N/S and this area has mostly high pressure… At the equator it is warm all year and they have a lot of rainfall. Near the tropics the air is mostly descending, this is called a high pressure. Deserts near the tropics like the Kalahari receive warm dry air. This process causes the deserts near the tropics as shown on my map.

Cold ocean currents are near most of the large deserts e.g. the Atacama and Namib on the Tropic of Capricorn. The air stays dry because the cold water doesn't get evaporated in to the air…

Significance to people's lives

People living in the desert spend a lot of time in search of water. It forces them to keep moving except when they stay at an oasis but even this isn't permanent because… People in the Sahara Desert dig deep holes and tunnel systems in the ground to get water from the rocks...

The San people in the Kalahari Desert get most of their water from plants…

People in the Atacama Desert put up big nets to catch the fog...
### Grade Boundary: High Not Achieved

6. For Achieved, the student needs to describe aspects of a geographic topic at a global scale.

This typically involves describing the:

- pattern
- factors and/or processes that caused or contributed to the pattern
- significance of the topic to people’s lives.

The student demonstrates some understanding of the geographic topic (deserts), through simple descriptions and relevant diagrams.

A clustered spatial pattern is inferred with the phrase “groups of deserts” (1), and relevant global examples are given. Two factors/processes, orographic rain and ocean currents are described demonstrating geographic understanding of both these factors in relation to the formation of deserts (2).

The significance of the topic for people’s lives is clearly described with evidence from the Sahara and Kalahari Deserts. The description shows understanding of how the desert environment controlled the people’s lives (3 and 4).

To reach Achieved, the student would need to more clearly describe how the factors caused or contributed to the identified spatial pattern. The diagrams and map could include evidence that directly links them to the requirements of the standard. For example, the map needed to show a spatial pattern and could have included mountain ranges responsible for creating a rain shadow effect and/or cold ocean currents.

The global evidence focuses on Africa, which covers both hemispheres, but a wider range of global evidence would be expected.
The deserts are found above and below the Equator. The biggest desert is the Sahara in Africa. The biggest desert in the southern hemisphere is in Australia. There are groups of deserts in most of the continents e.g. in the bottom of Africa there is the Namib and Kalahari. Another group has the Sahara Desert and Arabian Desert[1].

A map was included which showed desert locations but it did not identify a spatial pattern.

Factors and/or processes

Deserts don’t get rain because the rain happens on the hills before the air gets in to the desert. Air with water vapour rises to get over the mountains e.g. the Atlas Mountains by the Sahara, and it cools causing rain. This means that dry air is going into the desert [2].

Cold water doesn’t evaporate much so the cold ocean current near the Sahara causes the wind from the west to be dry…Cold ocean currents are near lots of the deserts…

Significance to people’s lives

It is a hard life to live in the desert. The Tuareg are nomads who live in the Sahara Desert. Their lives are controlled by the need for water. Sometimes they settle near to oases and grow maize[3]. They use camel dung as fuel to cook with and keep warm at night…

In the Kalahari Desert the San people get water from plant roots…[4].