Introduction

Mount Everest, known in Nepali as Sagarmāthā and in Tibetan as Chomolungma, is Earth's highest mountain above sea level, located in the Mahalangur Himal sub-range of the Himalayas. The international border between China (Tibet Autonomous Region) and Nepal runs across its summit point.

In 1865, Everest was given its official English name by the Royal Geographical Society, upon a recommendation by Andrew Waugh, the British Surveyor General of India. As there appeared to be several different local names, Waugh chose to name the mountain after his predecessor in the post, Sir George Everest, despite George Everest's objections.

Climbing on Everest

Mount Everest attracts many climbers, some of them highly experienced mountaineers. There are two main climbing routes, one approaching the summit from the southeast in Nepal (known as the "standard route") and the other from the north in Tibet. While not posing substantial technical climbing challenges on the standard route, Everest presents dangers such as altitude sickness, weather, and wind, as well as significant hazards from avalanches and the Khumbu Icefall. As of 2017, nearly 300 people have died on Everest, many of whose bodies remain on the mountain.

Routes

Mt. Everest has two main climbing routes, the southeast ridge from Nepal and the north ridge from Tibet, as well as many other less frequently climbed routes. Of the two main routes, the southeast ridge is technically easier and more frequently used. It was the route used by Edmund Hillary and Tenzing Norgay in 1953 and the first recognised of 15 routes to the top by 1996.

Most attempts are made during May, before the summer monsoon season. While attempts are sometimes made in September and October, the additional snow deposited by the monsoons and the less stable weather patterns at the monsoons' tail end makes climbing extremely difficult.

Permits

There were 334 climbing permits issued in 2014 in Nepal, these were extended until 2019 due to the closure. In 2015 there was 357 permits to climb Everest, and these permits were given a two-year
extension to 2017 (not to 2019 as with the 2014 issue). Nepal has been very welcoming to tourists and a significant tourism industry has been established.

**Elevation**

The current official elevation of 8,848 m (29,029 ft), recognised by China and Nepal, was established by a 1955 Indian survey and subsequently confirmed by a Chinese survey in 1975. In 2005, China remeasured the rock height of the mountain, with a result of 8844.43 m. There followed an argument between China and Nepal as to whether the official height should be the rock height (8,844 m., China) or the snow height (8,848 m., Nepal). In 2010, an agreement was reached by both sides that the height of Everest is 8,848 m, and Nepal recognises China’s claim that the rock height of Everest is 8,844 m.

**Environmental Conditions**

**High Speed Wind**

One of the issues facing climbers is the frequent presence of high-speed winds. The peak of Mount Everest extends into the upper troposphere and penetrates the stratosphere, which can expose it to the fast and freezing winds of the jet stream. In February 2004 a wind speed of 280 km/h (175 mph) was recorded at the summit and winds over 160 km/h (100 mph) are common.

**Table of Atmospheric Pressure**

<table>
<thead>
<tr>
<th>Atmospheric pressure comparison</th>
<th>Pressure (Kilopascal)</th>
<th>Pressure (PSI)</th>
<th>Reference</th>
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<tbody>
<tr>
<td>Olympus Mons summit</td>
<td>0.03</td>
<td>0.0044</td>
<td>–</td>
</tr>
<tr>
<td>Mars average</td>
<td>0.6</td>
<td>0.087</td>
<td>–</td>
</tr>
<tr>
<td>Hellas Planitia bottom</td>
<td>1.16</td>
<td>0.168</td>
<td>–</td>
</tr>
<tr>
<td>Armstrong limit</td>
<td>6.25</td>
<td>0.906</td>
<td>–</td>
</tr>
<tr>
<td>Mount Everest summit</td>
<td>33.7</td>
<td>4.89</td>
<td>[71]</td>
</tr>
<tr>
<td>Earth sea level</td>
<td>101.3</td>
<td>14.69</td>
<td>–</td>
</tr>
<tr>
<td>Dead Sea level</td>
<td>106.7</td>
<td>15.48</td>
<td>[72]</td>
</tr>
<tr>
<td>Surface of Venus</td>
<td>9,200</td>
<td>1,330</td>
<td>[73]</td>
</tr>
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</table>
The routes usually share one spot in common, the summit itself. The summit of Everest has been described as "the size of a dining room table". The summit is capped with snow over ice over rock, and the layer of snow varies from year to year. The rock summit is made of Ordovician limestone and is a low-grade metamorphic rock according to Montana State University. (see survey section for more on its height and about the Everest rock summit)

Below the summit there is an area known as "rainbow valley", filled with dead bodies still wearing brightly colored winter gear. Down to about 8000 meters is an area commonly called the "death zone", due to the high danger and low oxygen because of the low pressure.

Below the summit the mountain slopes downward to the three main sides, or faces, of Mount Everest: the North Face, the South-West Face, and the East/Kangshung Face.

**Early Attempts to Reach the Summit**

The 1924 expedition resulted in one of the greatest mysteries on Everest to this day: George Mallory and Andrew Irvine made a final summit attempt on 8 June but never returned, sparking debate as to whether or not they were the first to reach the top. They had been spotted high on the mountain that day but disappeared in the clouds, never to be seen again, until Mallory's body was found in 1999 at 8,155 m (26,755 ft) on the north face.
Acknowledgement

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