

PLANET



EARTH

# MOUNTAINS







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# MOUNTAINS



The Energy and Resources Institute

## **A note from Dr R K Pachauri**

We live on a truly unique and wonderful planet. It nurtures life, is home to an amazing variety of flora and fauna, and has a breathtaking variety of landscapes. However, in our quest for industrialization and urbanization, we have polluted our air and poisoned our waters; cut down trees to make way for human habitation; and have even caused the melting of polar ice caps.

Protecting our planet and preserving it for future generations in the face of rampant resource depletion is crucial. One way to effect this change is to allow children to appreciate the earth's unique features—vast oceans, hot and cold deserts, lush green forests teeming with life, rivers and lakes that have been our lifeline since ancient times, lofty mountains, and the two extensive icy poles.

This series, while offering a glimpse of our beautiful yet fragile planet to young minds, seeks to both entertain and enrich their thought processes. These books inform readers about the dangers facing landforms and oceans and their inhabitants, and I hope that they will inspire the future custodians of our planet to safeguard it.



R K Pachauri  
Director-General, TERI  
Chairman, Intergovernmental Panel on Climate Change

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# Mountains of the world

A mountain is a steep landform that rises high above its surroundings. It is made of rocks and earth. Mountains are found in all continents of the world. About 30 per cent of the earth's surface is covered by mountains, which are home to unique plants and animals.

## Together in a chain

Mountains are generally not found alone. They are in a group or long chain called range. A range can stretch for hundreds of kilometres. The Himalayas in Asia, Rockies in North America, Andes in South America, and Alps in Europe are examples of mountain ranges.

## The highest

The Himalayas in Asia are the highest mountain range in the world. They spread across Afghanistan, Bhutan, China, India, Nepal, and Pakistan. These mighty mountains also have the world's highest mountain peak—Mount Everest. Can you guess how tall it is? If you say more than 8,000 metres, you are close enough. Mount Everest is 8,848 metres tall!

► Nine of the ten highest mountain peaks are in the Himalayas. Only K2 belongs to the Karakoram range.



## The longest

The Andes are the longest mountain range on earth. Running about 7,000 kilometres along the western coast of South America, these mountains cover seven countries—Argentina, Bolivia, Chile, Columbia, Ecuador, Peru, and Venezuela. Mount Aconcagua, in Argentina, is the highest mountain peak (6,962 metres) in the Andes.



▲ The Andes are one of the great natural features of the globe, extending north-south about 8,900 kilometres.

## Underwater mountains

Did you know that below the oceans is a chain of mountains longer than any on the earth? The mid-ocean ridge system is a series of underwater mountains winding through the world's oceans. Extending about 60,000 kilometres, these mountains are connected and form a global chain that runs in every ocean of the world!



► Sky islands are formed when mountain ranges are separated from each other by grasslands, valleys or deserts such as in Arizona and Mexico.

# What can we find in the mountains?

**A mountain range has peaks and lowlands called valleys. Between the peaks are rivers, rapids, waterfalls, and icy glaciers. Forests, grasslands, meadows, and other vegetation grow on the surface of the mountains.**

## Glaciers

High mountain ranges are always covered with huge masses of ice called glaciers. While rivers are flowing fresh water, glaciers are frozen fresh water. The Siachen glacier in northern Jammu and Kashmir extends about 72 kilometres. It is the largest glacier in the world outside the polar regions. Glaciers covering huge areas are called ice fields.

## Rivers and valleys

The snow on the peaks melts during summer and provides continuous water supply to rivers. Almost all major river systems of the world originate in the mountains and flow downhill. The lowland between two mountains is called valley.

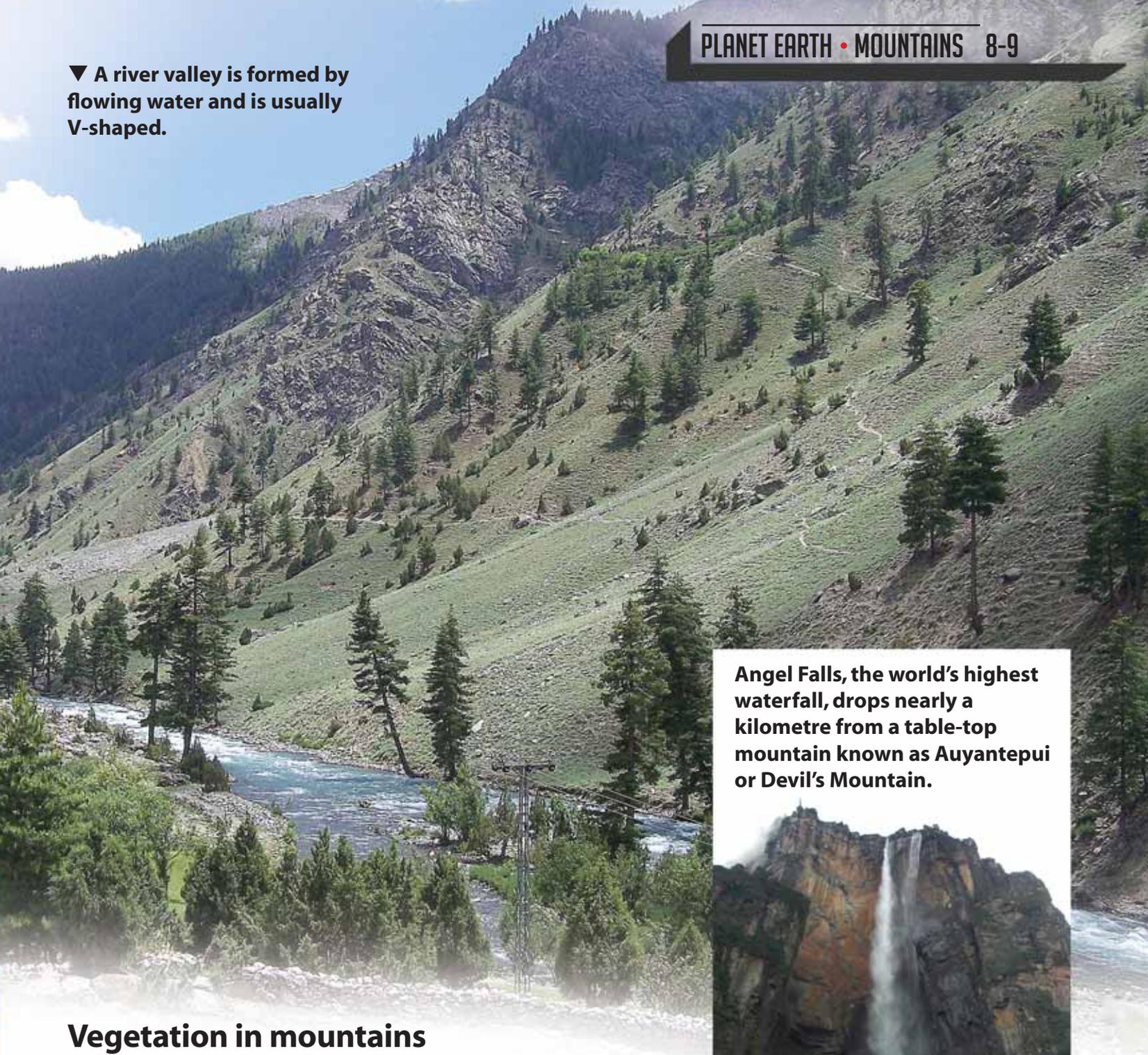
## Rapids and waterfalls

Mountain areas are marked by waterfalls, which are formed due to rivers or streams flowing down steep rocks. Over the years, water erodes the rock, and the bed of the river gets steeper. Due to the constant erosion, the waterfall retreats backwards. The Niagara Falls, the world's biggest waterfall, is actually retreating at the rate of one metre per year!

► **The glaciers in the Himalayas are the source of important rivers of Asia.**



▼ A river valley is formed by flowing water and is usually V-shaped.



Angel Falls, the world's highest waterfall, drops nearly a kilometre from a table-top mountain known as Auyantepui or Devil's Mountain.



## Vegetation in mountains

Mountains have a distinct vegetation. Most of them have more than one type of vegetation, which changes with the altitude, or height, of the mountain. This vegetation supports an amazing variety of insects, birds, and mammals. Many creatures are unique to mountains. The Ozark Mountain Forests in the United States, for example, has a special earthworm that glows like fireflies in the dark!

► The minerals dry up and look like chalky projections on the floor (stalagmite) or hang from the roof (stalactite).

# Planet Earth : Mountains



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