

**Year group: 5      Topic: Mountains**

### Key Concepts

- What are mountains?
- How are they formed – tectonic plates – different types of mountains
- Where are mountains found? – Atlas/map work
- Climate and habitation
- Comparing mountains – from sea level – base of ocean
- Polar Explorers – Sir Edmund Hilary and Everest
- Tourism and environmental impact

**How will children demonstrate their understanding of the key concepts and knowledge? E.g. Big outcomes, writing, presentations, quizzing, external audience opportunity etc.**

Visit by someone who has climbed The Atlas Mountains – Year group visit to Whitexxx indoor

### Key Knowledge

- What is Earth's structure? – Recap from Yr4 - Geological structure of Earth – Know the five layers of the Earth: **Crust** - made up of pieces called tectonic plates. **Lower and upper Mantle** - 84% of the Earth, with high temperatures and constantly moving causing pressure on the crust and sometimes leaks to form volcanoes, mountains and Earthquakes. **Outer core** - 1/3 of Earth's mass with temperatures as hot as the sun, made up of liquid iron and nickel and creates the Earth's magnetic field. **Inner core** - similar material as outer core, but a solid metal ball, known as the Earth's engine.
- Why Mount Everest? – Know Mount Everest as being the tallest natural structure above sea level. Located in Himalayan mountain range which has the highest mountains on Earth, bordering China and Nepal. Know that after two world wars, bloodshed and espionage that led to changing borders and new political regimes, powerful nations were now pursuing a race to achieve things that were once thought impossible, first man in space, on the moon, to reach the north pole, the south pole, Everest. **Mauna Kea** is the tallest mountain on Earth – below sea level.
- How was Mount Everest formed? – Expand on previous knowledge (volcanoes). Know and describe different types of mountains – **fold, fault block, dome, volcanic** and **plateau mountains** are formed differently due to geological structure of Earth. Everest is a **fold** mountain due to the movement of tectonic plates - Himalaya lies on the join of Eurasian and Indian plates.
- How does Everest compare to other mountains/ranges? - Using secondary resources (maps/atlas/internet), know the main mountain ranges of the world: **Rocky; Alps; Atlas; Himalayas; Andes; Alaska Range; Ethiopian Highlands; Great Dividing Range; Caucasus Range; Transantarctic** . Know heights (recognising scale) of different mountains. Know that mountains are very, very huge structures and **ancient**.
- Who was Sir Edmund Hilary? – Famous polar explorer who with Tenzing Norgay (a Sherpa) were the first to reach the summit on 29th May 1953. Describe their endeavour to climb the tallest mountain and how this feat has affected the lives of the people who live by the mountain and the mountain environments?

How does Himalayan climate affect weather on Everest? – Know the difference between weather and climate – **Climate**: A 30 year average of weather for a region (temperature, precipitation and wind speed and air pressure). **Weather**: The occurrence of temperature, precipitation, wind speed and air pressure that happens on a daily bases; weather is what you get, climate is what you expect. Recognise that different mountain ranges across the world have different climates and weather patterns according to their location. How does this affect mountain trade/visits/climbers

What is mountain tourism? – People visit mountains for **charity**, to see the **fauna and flora, for sports, for the challenge, clean air and beautiful scenery**. Understand the impact tourism has on mountain regions; **economically, socially and environmentally**.

### Key skills and KOP learning habits

**Being resourceful** – Using secondary resources to find information

**Communicating ideas** – Drawing maps, diagrams and describing,

**Thinking things through** - Identify cause and effect

**Communicating in different ways** – Statistics - scale /measure, conversion – explanations with evidence

**Interpreting information** – Statistics – asking and answering questions

**Use a range of field work techniques** – 8 point compass and 4 grid references, identify longitude, latitude, Tropics of Cancer, Capricorn and Equator.

### Opportunities for continuous learning

- Improving mapping skills and knowledge of where places are in the world
- Improving chronology skills and knowledge of when important things happened in history

### Links to other subjects

- GR/History – Sir Edmund Hilary – National Geographic
- English/History – Sir Edmund Hilary - first person – diary log book
- Maths – Bar charts, line graphs, positive and negative numbers, measurement conversion and scaling
- Art – Mountain scape

**Key vocabulary** tectonic plates, mantle, legend, steep, peaks, ridges, glaciers, fiords valleys, snow-capped, ancient landforms, folded, fault-block, up-warped (dome), volcanic, plateau, ranges, sea level, ocean floor, scale, weather, climate, hypothermia, landslides, avalanche, altitude, Sherpa, economic, social environmental, impact