

Geography Lower Key Stage Two

Summer Term - Mountains

What are the characteristics of the Himalayan mountain range?

boundaries, cartography, climate, physical geography

Curriculum enrichment (linked to Enquiry Question)	High quality maps and videos
Literacy Rich Curriculum	Disciplinary Reading and Writing

Our Curriculum Key Drivers - Flourishing for All, Diversity and Challenge

L	Enquiry questions	Knowledge Review Questions	Key Teacher subject knowledge	Knowledge	Apply (lesson - planned in phases)	Key Vocabulary	Outcome of Lesson
1	What are mountains?	<u>Last Lesson:</u> <u>Last Term:</u> <u>Rivers</u> <u>Renewable Energy</u> <u>Last Year:</u> Y3: Our Wonderful World Life in the United Kingdom Let's Explore the World Y4: Volcanoes Earthquakes Land use	A mountain is a natural elevation of the Earth's surface, rising to a summit. Mountains have an elevation greater than that of a hill, usually greater than 610m. Mountains are formed in different ways; Fold mountains are formed when tectonic plates that make up the Earth's surface, move and collide with each other. As they meet, one plate is pushed down while the other is pushed up and compressed, which forms fold mountains. Fold mountains have upward folds called anticlines and downwards folds called synclines.	HP.B - Know and understand key aspects of physical geography such as the water cycle, rivers and mountains.	<u>Disciplinary Reading:</u> BBC Teach: Mountains video and transcript. Show the children the Marvellous mountains presentation to explain what a mountain is and its features. Use slides 1-4 of the Types of mountain presentation to introduce the children to the fold mountain type, revising plate tectonics to explain how they are formed. (The Himalayas are fold mountains)	Peak/summit Elevation Altitude slope/face Base Ridge Plateau Valley Snow line Tree line Range Plate tectonics	Labelled diagram of mountain features. The photo in the MM presentation showing the valley is a good one containing almost all the features (with Valley as an 'I do'). Y4 to describe as well as label the features.
2	How are mountains represented on a map?	<u>Last Lesson:</u> <u>Last Term:</u> <u>Rivers</u> <u>Renewable Energy</u> <u>Last Year:</u> Y3: Our Wonderful World Life in the United Kingdom Let's Explore the World Y4: Volcanoes Earthquakes Land use	Topography is the arrangement of the natural and artificial physical features of an area. Contour lines on a map show us how steep an incline is (spaced out = gentle incline; very close together = steep incline) and the height above sea level. A peak is the highest point/summit of an incline and is marked on a map with name and height above sea level. https://getoutside.ordnancesurvey.co.uk/guides/understanding-a-map-contour-lines-for-beginners/	SF.B - Know how to use a wide range of resources to identify the key physical and human features of a location.	<u>Disciplinary Reading:</u> Use text from Different types of map slides. Introduce the children to the purpose and interpretation of contour lines by watching the video Understanding contour lines with Steve Backshall and Ordnance Survey . Using copies of the Ordnance Survey map (OS Explorer O6 is recommended but any with a variety of contour lines and peaks), ask the children, 'What do you notice about how the contour lines are used on the map? What type of landscape do you think this is?' Ensure they understand that we can tell the gradient and topography of the land by how close contour lines are together (spaced out = gentle incline; very close together = steep incline) and the numbers on the contour lines tell us how many metres above sea level the land is. Use https://www.ordnancesurvey.co.uk/mapzone/assets/doc/map-skills/Relief-and-Contours-en.pdf to look at how certain geographical features are shown using contour lines. Together, identify a peak and its height by using the contour lines. Recap on the use and identification of four-figure grid references and find the grid reference for the peak identified.	Contour line Ordnance Survey Peak Landscape Gradient Topography Incline Sea level Grid reference	Using the structure of the Contour lines recording sheet show children how to create a table in their books. Pupils to identify at least five other peaks on the map, recording their name, height in metres and grid reference. Y4 explain how contour lines show the topography of the land (gentle/steep incline and height above sea level).
3	Where in the world can mountain ranges be found?	<u>Last Lesson:</u> <u>Last Term:</u> <u>Rivers</u> <u>Renewable Energy</u> <u>Last Year:</u> Y3: Our Wonderful World Life in the United Kingdom Let's Explore the World Y4: Volcanoes Earthquakes Land use	A mountain range is a chain of mountains that are close together. They are usually arranged in a line connected by ridges. Significant mountain ranges of the world include the Himalayas, Urais, Andes, Alps, Atlas, Pyrenees, Apennines, Balkans and Sierra Nevada.	SF.A - Know how to use maps, atlases, globes, and digital/ computer mapping to locate countries and describe features studied.	<u>Disciplinary Reading:</u> How are mountains made? NB Chromebooks will be needed for this lesson. Remind pupils what a mountain range is. Show a physical world map and locate some significant mountain ranges: Himalayas (Asia), Eastern Rift mountains (Africa), Snowy Mountains (Australia), Andes (S. America), Olympus Range (Greece), Alaska Range (N. America) and Rockies (N. America). The World Mountains Information Sheet gives information about a notable mountain from each of these ranges (except for the Rockies). Model how to locate Mount Everest in an atlas and using Google earth/maps.	Mountain range Physical map Locate	Locate the mountains from the information sheet using atlases and/or Google earth/maps. Use the structure of the World Mountains recording sheet to record on a map and in a table (you may prefer pupils to record the information about the mountains on the outside of the world map on a double page). Y4 Use a blank world map rather than the pre-labelled one on the recording sheet. You may wish the 'interesting fact' section to be just for Y4 too - they can use chromebooks to find these.
4	Where are the Himalayas and what are they like?	<u>Last Lesson:</u> <u>Last Term:</u> <u>Rivers</u> <u>Renewable Energy</u> <u>Last Year:</u> Y3: Our Wonderful World Life in the United Kingdom Let's Explore the World Y4: Volcanoes Earthquakes Land use	The Himalayas have a mountain climate: air is thinner the higher up in the atmosphere you go and this means that it can trap less heat so the temperature is cooler. The temperature falls by 1 °C for each 100m you go up through the atmosphere. Mountains tend to experience higher levels of precipitation than the flat land surrounding them, which often falls as snow. Mountain weather conditions also change drastically. For example, the weather could be clear blue skies, then a thunderstorm minutes later. The temperature can also go from being extremely hot to below freezing.	SF.A - Know how to use maps, atlases, globes, and digital/ computer mapping to locate countries and describe features studied. HP.A - Know how to locate lines of latitude and longitude and understand their impact on climate.	<u>Disciplinary Reading:</u> Climate Zones. Use text from Kids Britannica article but edit the types of climate section to give information about the climate zones as shown on this Climate Zones Map . Information can be found in the World Climate Zones slides . Recap the features of the Himalayas using information from the What are the Himalayas? slides. Locate the Himalayas on a physical world map and find lines of latitude and longitude. Discuss the weather and climate we would expect at this line of latitude (it is on the same line as North Africa, the Mediterranean Saudi Arabia, Mexico and the Caribbean) and reasons why higher up in the mountains they do not share the same weather and climate (desert/arid; tropical) as these places - it is a mountain climate (see key teacher subject knowledge). Show Climate Zones Map and pictures of desert, tropical and mountain climates to help make a comparison.	Himalayas Tectonic plates Sea level Inhospitable Air pressure Altitude Location Topography Latitude Longitude Weather Climate Mountain climate zone atmosphere	Map-based analysis of the Himalayas: pupils to use atlases and maps that will help them to explain the features of the Himalayas. They should refer to location, topography, latitude/longitude, weather and climate. Their writing could be structured under these headings. Pictures and maps could be included in their analysis to support their explanations. Y4 Should include an explanation of why, despite their location, the higher altitudes of the Himalayas have a mountain rather than desert or tropical climate.
5	What are the characteristics of the different altitudinal zones?	<u>Last Lesson:</u> <u>Last Term:</u> <u>Rivers</u> <u>Renewable Energy</u> <u>Last Year:</u> Y3: Our Wonderful World Life in the United Kingdom Let's Explore the World Y4: Volcanoes Earthquakes Land use	The four altitudinal zones from highest to lowest are: glacier, tundra and meadow, coniferous and deciduous forest and subtropical rainforest.	HP.B - Know and understand key aspects of physical geography such as the water cycle, rivers and mountains.	<u>Disciplinary Reading:</u> Altitudinal zones information sheet Recap what a habitat is, what it must provide for living things, namely food, water, air and shelter, and how living things must be suited to their habitat in order to survive. Ask the children to name a familiar habitat, an animal or plant that lives there and how it is suited to its habitat. Explain that due to the varying altitude of mountainous areas, different habitats can exist, with a habitat near the top of a mountain being very different to one at the bottom. Remind children of the Altitudinal zones information sheet . Discuss the four different zones in the Himalayas, pointing out the differing climates, conditions and living things.	Altitude Altitudinal zone Habitat Climate Conditions Glacier Tundra and meadow Coniferous Deciduous Subtropical rainforest	Annotate a diagram of the Himalayan altitudinal zones, including information about climate, conditions and living things. There are a couple of options for diagrams to use here . Y3 could be given a simple structure for this taken from the recording sheet . Y4 write full sentences including the relevant information.
6	What is life like in the Himalayas?	<u>Last Lesson:</u> <u>Last Term:</u> <u>Rivers</u> <u>Renewable Energy</u> <u>Last Year:</u> Y3: Our Wonderful World Life in the United Kingdom Let's Explore the World Y4: Volcanoes Earthquakes Land use	https://www.britannica.com/place/Himalayas/People	HP.C - Know and understand key aspects of human geography, including energy and natural resources, including water.	<u>Disciplinary Reading:</u> I see the sun in Nepal (picture book with Nepalese script). If you don't have the book, use the youtube video of it being read. At the back of the book is some context about the village it is set in that can give some information about life in the Himalayas. Photos of the text can be found here . Begin by explaining that because the Himalayas span a large area and many countries, the 50 million people who live there come from diverse backgrounds and have a wide range of cultures, traditions, religions and way of life. We will be focusing on the people of Nepal, particularly the Sherpa. Watch the Life in the Himalaya video for a recap of the physical geography of the Himalayas and an introduction to life for people who live there. Make notes (preferably in a notebook to be shown later on the visualiser) while the video is playing to detail information about human adaptation to the high altitude, Sherpa, farming (economy), transport and tourism. More detailed information about the Sherpa can be found here (including how life has changed and is not the same for everyone) and on the BBC Newsround website . You may choose to give an additional perspective on life in the Himalayas using page 2 of Living in the mountains , which details daily life and school life in the village of Kapkote, India, close to the border with Nepal.	Culture Tradition Sherpa Adaptation Economy Agriculture Tourism Transport Education Settlement	Create a fact file about the people of the Himalayas, using both the information gathered from I see the sun in Nepal , the video and other information collated. The children could include photos, 'Did you know?' fact boxes and headings to organise their work. Y4 should make reference to how life has changed for the Sherpa since tourism began to grow in the 1950s (its impact on them).