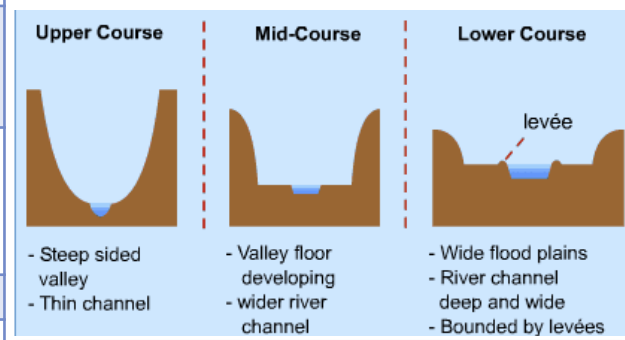


UK's Physical Landscapes	
<b>Geology</b>	Type and characteristics of rock
<b>Igneous</b>	Rock formed from cooled and solidified magma. There are two main types: those that cool below the ground (intrusive) and those that cool after being erupted (extrusive). e.g. Granite, Basalt
<b>Sedimentary</b>	rocks formed from deposits of material which has originally come from older rocks or living organisms. e.g. Chalk, Sandstone
<b>Metamorphic</b>	Rock formed from the transformation of an existing rock into a new rock type. The cause of the change is an increase in heat and/or pressure. E.g. Shist, Slate.
<b>Tectonic activity</b>	Movement of tectonic plates either convergence (coming together and melting through friction) or divergence moving a part and creating a gap allowing material from the mantle to rise.
<b>Upland</b>	High above sea level (hills and mountains)
<b>Lowland</b>	Near sea level (valleys)

Channel Characteristics	
<b>Channel shape</b>	The gradient of the river (how steep or flat it is)
<b>Valley profile</b>	The shape of the river channel (e.g. v shaped)
<b>Discharge</b>	Is the volume of water flowing through a river channel
<b>Velocity</b>	The speed of the water
<b>Sediment size/shape</b>	The size and/or jagged/smoothness of the sand and stones in the river

River features	
<b>Source</b>	Where the river begins.
<b>Mouth</b>	Where the river meets the sea.
<b>Tributary</b>	A small river that joins a larger river.
<b>Confluence</b>	The point 2 rivers join.
<b>Drainage basin</b>	An area of land drained by a river and it's tributaries .
<b>Watershed</b>	An imaginary line that marks the edge of a drainage basin.
<b>River courses</b>	<b>Upper-</b> Near the source the river is steep with a narrow channel <b>Middle-</b> Middle of the river , the gradient is less steep and erosion has widened the channel <b>Lower-</b> Near the mouth. The volume of water in a river is at its greatest in the lower course. This is due to the contribution of water from tributaries. The river channel is deep and wide and the land around the river is flat



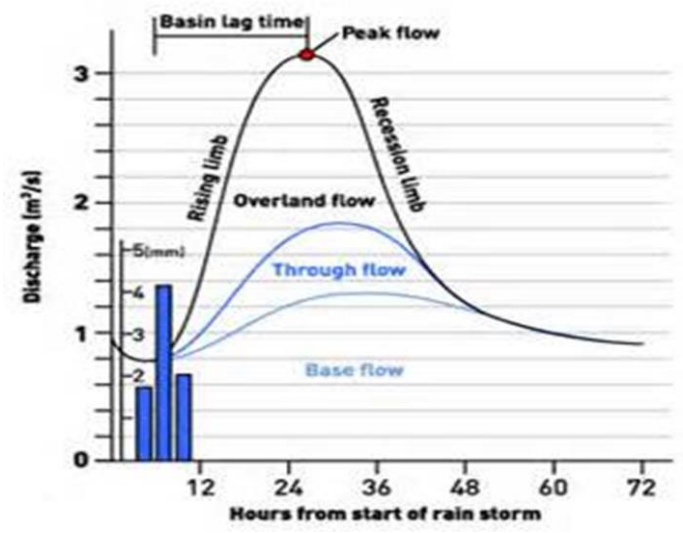
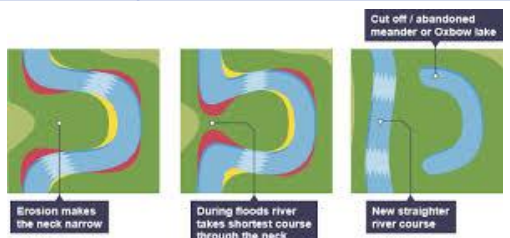
**Human activities can lead to changes in the river landscapes**

<b>Urbanisation</b>	An area becoming more urban (city)
<b>Agriculture</b>	Farming
<b>Flooding</b>	When the amount of water in a river exceeds its carrying capacity (the maximum amount that the river can hold) so it bursts its banks and water spreads into surrounding areas
<b>Hard Engineering</b>	Man made structures used to control or prevent natural processes
<b>Soft Engineering</b>	Strategies that use natural processes and materials

**The Changing Landscapes of the UK - Rivers**

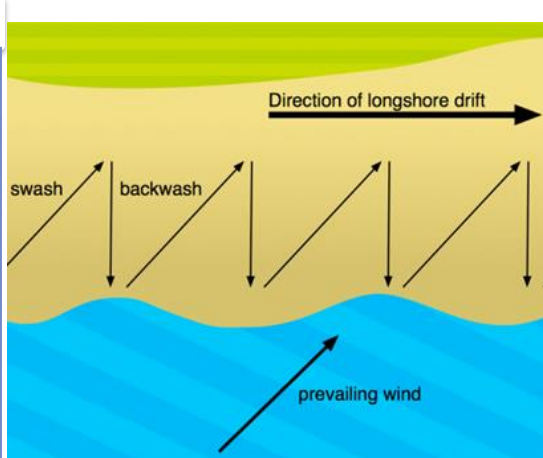
Landforms of erosion and deposition	
Erosion	Deposition
<b>Interlocking Spurs</b> - projections of land in the upper course of the river that overlap with each other	<b>Floodplains</b> - Flat area surrounding a river that is covered in water when a river floods
<b>Waterfalls</b> - water, especially from a river or stream, dropping from a higher to a lower point	<b>Levees</b> - A ridge of sediment at the side of a river. Can be manmade or natural
<b>Gorges</b> - a narrow valley between hills or mountains left behind when a waterfall retreats	<b>Point bars</b> - Sand deposited on the inside of a river bend
<b>River cliffs</b> - Steep sided bank of a river	
<b>Oxbow lake</b> - A c shaped lake left behind when a meander is cut off from the river channel	

Hydrographs	
<b>Hydrograph</b>	A graph which shows the discharge of a river at any one given point.
<b>Discharge</b>	The volume of water flowing through a river channel.
<b>Lag Time</b>	Time between peak rainfall and peak discharge.



Physical processes interact to shape coastal landscapes

<b>Concordant</b>	A concordant coastline has the same type of rock along its length.
<b>Discordant</b>	Bands of different rock type run perpendicular to the coast. The differing resistance to erosion leads to the formation of headlands and bays.
<b>Constructive waves</b>	Flat and low in height and have a long wavelength. Their strong swash carries material up the beach depositing material and building the beach.
<b>Destructive waves</b>	High, steep waves with a short wavelength. The crash down on the beach, removing material with a strong backwash.
<b>Seasonality</b>	Erosion rates depend on time of year due to difference in temperature, rainfall and storms
<b>Storm Frequency</b>	How often storms occur
<b>Prevailing wind</b>	The wind direction the wind blows from most often

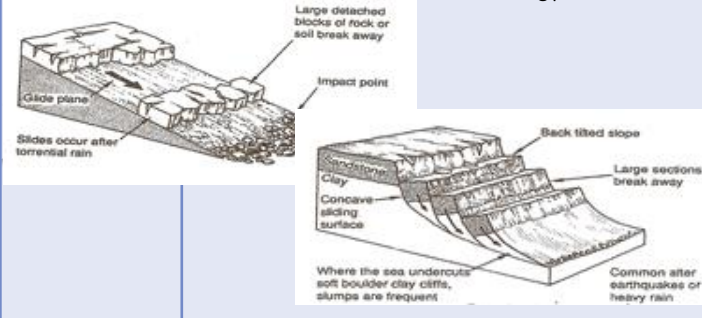


The Changing Landscapes of the UK - Coasts

Physical processes interact to shape river and coastal landscapes

<b>Weathering</b> - The weakening or breakdown of rock in situ  In situ means remaining in the same place	<b>Mechanical</b> - The breakdown of rock into smaller pieces by physical means. Usually caused by the effects of changing temperature on rocks. Examples - frost wedging (freeze & thaw) thermal expansion (heat & cool) <b>Biological</b> - The disintegration of rocks as a result of the action by living organisms. A good example is an animal that can burrow into a crack in a rock or tree roots that break rock apart <b>Chemical</b> - Breakdown of rock caused by chemical reactions e.g. weak acid in rain water
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<b>Mass Movement</b>	<b>Slides</b> - Landslides happen on cliffs made from softer rocks or deposited material, which slip down when lubricated (due to heavy rainfall). <b>Slumps</b> - Where softer rock is on top of much harder rock, cliffs might slump After heavy rain, whole sections of the cliff face may move downwards on a 'concave sliding plane'
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Coastal erosion and deposition create distinctive landforms

**Headlands and bays**

Found on discordant coastlines where hard and soft rock are next to each other. The softer rock erodes faster, curving in to form a bay. The hard rock sticks out as headlands

**Caves, arches, stacks and stumps**

As a headland is eroded it forms a series of different landforms. First a crack forms, which widens to a cave. When the cave erodes all the way through to the other side it becomes an arch. The arch will then collapse leaving a stack. This will crumble into a shorter rock call a stump

<b>Erosion</b> - the breaking down and removal of the material.	<b>Abrasion</b> - Fragments of rocks, pebbles and sand are picked up by the waves and thrown against the cliff face, causing pieces of rock to break off. <b>Hydraulic action</b> - Water is forced into cracks in the rock. This forces the air out quickly and breaks down the bank/cliff. <b>Attrition</b> - The rocks being carried by the water knock into each other and break. This will make them smaller and rounder. <b>Solution</b> - Acids in the water dissolve some of the rock.
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**Wave-cut platforms**

A cliff erodes most between high and low tide marks. This creates a wave cut notch. When the notch is big enough the cliff above it collapses to leave a wave cut platform of rock sticking out just below low tide mark where erosion wasn't as quick

**Beaches, bars and spits**

Material is transported along a beach by longshore drift. If the coastline changes direction, or is cut off by a river, longshore drift still continues in it's original direction. This will cause sand to be deposited in a line out to sea forming a spit. If it stretches so far it joins another piece of mainland it is called a bar

<b>Transportation</b> - the movement of material by a river or the sea	<b>Traction</b> - Rocks and stones are pushed by the flow of water and roll along the river bed or ocean floor <b>Saltation</b> - Stones bounce a long the river bed or ocean floor <b>Suspension</b> - Particles of sand and mud are small enough to be carried along by the current <b>Solution</b> - The material that is dissolved by erosion remains dissolved in the water as it flows downstream
<b>Deposition</b>	Materials carried by the water (like sand) are dropped and left in an area.