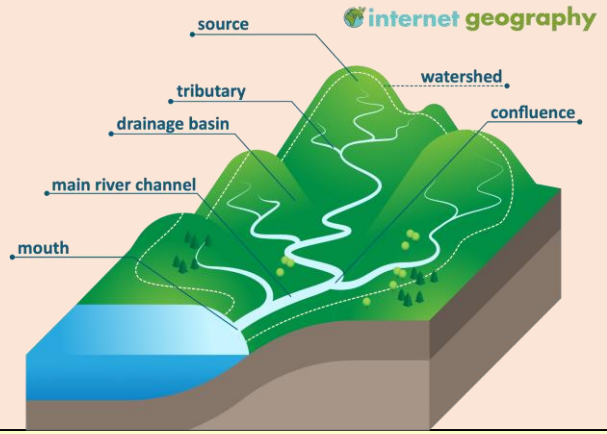
Knowledge Organiser	Subject	Year	Term	KO n.o.	Title
	Geography	8	1		Rivers and Flooding Hazards

The drainage Basin of a River



Key word	Definition
Interception	When leaves catch rainwater as it falls.
Surface run-off	When water runs along the top of the ground.
Precipitation	The general name for all forms of water that fall from the sky, including rain, snow and hail.
Permeable	Rock that allows water to soak into it.
Impermeable	Rock that does not allow water to pass through it.
Tributary	A smaller river that joins the main one.
Erosion	The wearing away of rock, stones and soil.
Throughflow	The movement of water through the soil just underneath the surface
Confluence	The point where two rivers meet.
Deposition	The dropping of materials. Rivers often deposit rocks and sediment.

Four Types of River Transportation

Traction - large, heavy pebbles are rolled along the river bed.

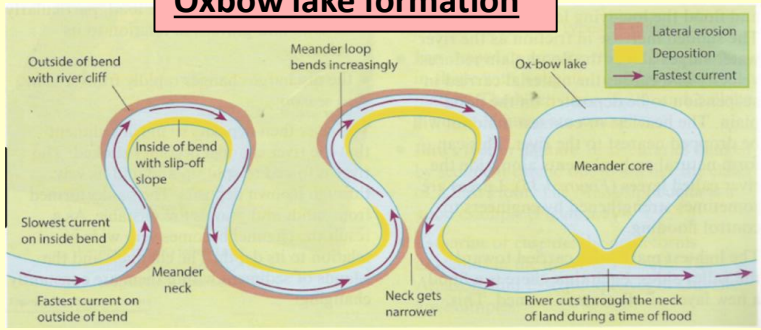
Saltation - pebbles are bounced along the river bed.

Suspension - lighter sediment is suspended (carried) within the water.

Solution - the transport of dissolved chemicals.

Hard engineering	Soft engineering
Use technology to overcome nature Usually expensive	Use natural processes to protect land Usually cheaper

Oxbow lake formation



Factors Causing Floods

- Deforestation – less interception and more surface runoff
- Urbanisation and baked/frozen ground – less infiltration leading to more surface runoff
- Long periods of rainfall – saturated ground leading to more surface runoff

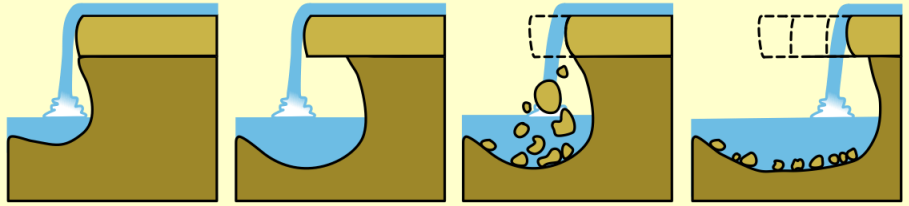
Four types of Erosion

Abrasion – Scraping by rocks and sediment

Attrition – rocks **bumping** into each other getting smaller, smoother and rounder

Hydraulic action – where **fast flowing** water gets into cracks and breaks them open

Solution – Water dissolves soluble minerals from the riverbed and riverbank



1. Waterfalls typically form in the upper stages of a river. They occur where a band of hard rock overlies a softer rock. Falling water and rock particles erode the soft rock below the waterfall, creating a plunge pool.

2. The soft rock is undercut by erosional processes such as hydraulic action and abrasion creating a plunge pool where water and debris swirl around eroding the rock through corraision further deepening it and creating an overhang.

3. Hard rock overhang above the plunge pool collapses as its weight is no longer supported.

4. Erosion continues and the waterfall retreats upstream leaving behind a gorge.

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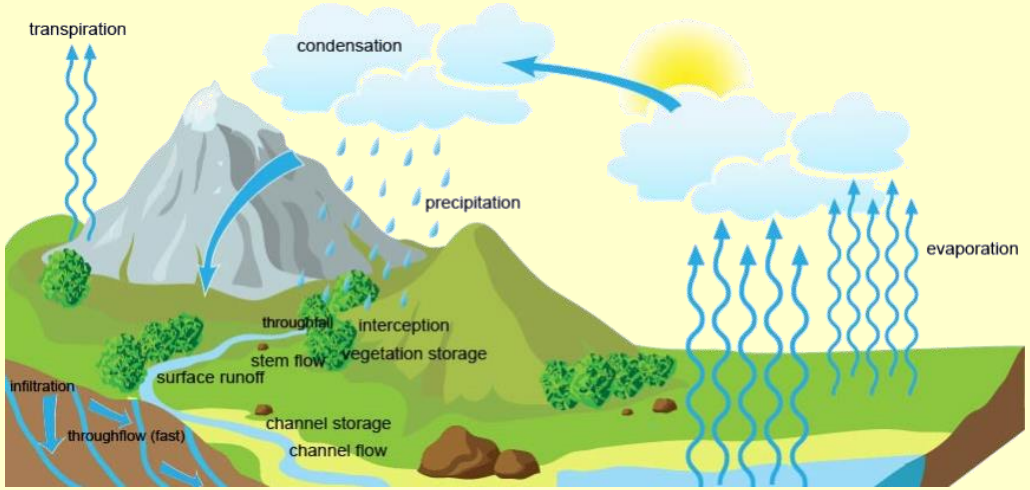
Homework 1:

1. Explain how water moves through the water cycle using the diagram below



Homework 2:

- Learn the key terms from the sheet you were given in class.
- Practice recalling both the definition and key term.
- Get someone to test you
- Write up 4-6 sentences including the key words

Homework 3:

1. Explain how each of the following things led to York flooding in 2015
   - Urbanisation, leading to less infiltration
   - Deforestation in the drainage basin leading to reduced interception
   - Heavy rainfall causing saturated ground and less infiltration
2. What do you think was the main cause of the flood? Justify your answer.

	I can…	Tick
How does water move around the world?	Explain how water travels around the water cycle including: - Evaporation, Condensation, Precipitation, Interception, Infiltration, Surface runoff , Throughflow	
	Explain how the **permeability** of the ground affects the water cycle.	
	Identify and describe the different features of a river's drainage basin, including: Source, Mouth, Confluence, Tributary, Channel, Watershed	
How do erosion, deposition and transportation create different river landforms?	Describe four different types of erosion: 1) Attrition, 2) Abrasion, 3) Corrosion, 4) Saltation	
	Describe four ways that a river transports its load: 1) Traction 2) Saltation 3) Suspension 4) Solution	
	Explain the formation of several river landforms including: Waterfalls, Meanders, Ox bow lakes, Levees	
	Define deposition	
	Identify the features found at the cross section of a meander	
	Explain how the water speed causes features of erosion and deposition, namely river cliffs and slip-off slopes.	
How is flooding caused and managed?	Explain how a number of factors (human and natural) can lead to flooding, including deforestation, urbanisation, heavy rainfall and frozen ground.	
	Describe a number of methods that can be used to prevent flooding	
	Assess the **costs** and **benefits** of different flood prevention schemes, including soft and hard engineering,	