

What you should know	What you should be able to do
<p>The hydrological cycle is the continuous circulation of water within the Earth's hydrosphere, driven by solar insolation, through all 5 of Earth's spheres</p> <p>Solar insolation is the heat from the Sun</p> <p>Solar insolation passes through the Earth's atmosphere and heats up the land and the sea</p> <p>The land and the sea then radiates some of this heat back out into the atmosphere</p> <p>Evaporation is the change in water from a liquid to a gas through heating</p> <p>Condensation is the change in water vapour from a gas to a liquid through cooling</p> <p>Precipitation is water released from clouds in the form of rain, freezing rain, sleet, snow, or hail</p> <p>Interception is when precipitation does not directly enter the land or sea but is diverted into trees or plants</p> <p>Surface run-off is when precipitation hits the land and passes down a slope towards a river or the sea</p> <p>Infiltration is when water sinks through the soil</p> <p>Percolation is when water sinks through rock</p> <p>Throughflow is when water passes through the soil and passes down a slope under the surface of the Earth towards a river or a sea</p> <p>Transpiration is the evaporation of water from plants and trees into the atmosphere</p>	<p>Accurately draw and label the hydrological (water) cycle and define the keywords</p> <p>Explain how changes in the hydrological cycle affect rivers</p>
<p>A river's drainage basin is an area of land where water from rain or snow melt drains downhill into a body of water such as a river, lake, wetland, or ocean.</p> <p>The watershed is an area of high ground which divides two or more river systems, so that all streams on one side flow into one river and those on the other side flow into a different river</p> <p>The source of a river is the point where a river begins, either on high ground, or where water seeps through the ground forming a spring</p> <p>A river channel is the space where the water flows in a river</p> <p>A confluence is where two rivers meet</p> <p>Tributaries are smaller rivers or streams that join larger rivers</p> <p>The mouth of a river is where it flows into a sea or lake</p>	<p>Accurately draw and label a river's drainage basin and define the keywords</p> <p>Explain why the size, shape, and geology of a river's drainage basin affects people and places</p>
<p>River processes</p> <p>Erosion (hydraulic action, abrasion, attrition, solution) is the wearing away of the bottom and sides of a river channel</p> <p>Transportation (traction, saltation, suspension, solution) is the movement of eroded material downstream by the river flow</p> <p>Deposition is the dropping off of eroded material as the land becomes less steep</p> <p>Velocity is the speed the river flows, measured in metres per second</p> <p>Discharge is the volume of water flowing in a river channel at a fixed point</p> <p>A greater discharge of water leads to a greater amount of erosion and a wider and deeper river channel</p>	<p>Identify and define the different river processes</p> <p>Explain how changes in the hydrological (water) cycle and differences in a river's drainage basin affect river processes</p>
<p>River shapes</p> <p>V-shaped valleys and interlocking spurs are found in the upper course of a river where there is only a small volume of water in the river channel</p> <p>Waterfalls and gorges are formed when hard rock is lying on top of soft rock. The hard rock cannot be eroded easily and so the soft rock is eroded beneath the hard rock creating a waterfall</p> <p>Meanders and ox-bow lakes are mainly found in the middle to lower course of a river and formed through erosion and deposition. Meanders are bends in the river</p> <p>Floodplains and levees are mainly found in the lower course of the river and are formed during times of a rivers flood</p> <p>Deltas and estuaries are found in the lower course of a river and are where the rivers meet the sea or a lake</p> <p>The long profile of a river is a diagram to show the changes in river shape as it flows from its source to its mouth</p>	<p>Identify, accurately draw and label river landforms, including the use of OS maps and images</p> <p>Explain how river landforms are formed by different river processes</p> <p>Explain how geology, velocity, discharge and drainage basin size and shape affect the formation of river landforms</p>
<p>River management is used by humans to change a rivers course</p> <p>Hard engineering involves changing the shape, flow, or direction of a river through barriers such as dams, weirs and channelisation, often to limit the risk from flooding</p> <p>Soft engineering involves sustainable management such as afforestation (planting of trees), floodplain zoning and flood alerts and warning</p>	<p>Assess the advantages and disadvantages of both hard and soft river management</p>

Kemnal Keys: Geography — Why are rivers important?

1) Draw and label a diagram of the hydrological (water) cycle

2) Draw and label a diagram of a river's drainage basin

3) Draw and label diagrams to show the 4 erosion processes

4) Draw and label a diagram of a waterfall, showing hard and soft rock

5) Draw and label diagrams to show the 4 transportation processes

6) Draw and label diagrams of hard and soft river management methods and how they reduce risk from flooding