




What you should know	What you should be able to do
<p><b>The hydrological (water) cycle</b></p> <ul style="list-style-type: none"> <li>The continuous movement of water through all of the Earth's spheres through insolation, evaporation, condensation, precipitation, interception, infiltration, percolation, surface run-off and throughflow</li> <li>Although the amount of water in the hydrological cycle is constant, its distribution through inputs, flows, stores and outputs varies on local, national, regional and global scales</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Accurately <b>draw</b> and <b>label</b> the hydrological (water) cycle and <b>define</b> the keywords</li> <li>⇒ <b>Explain</b> how changes in the hydrological cycle affect rivers</li> </ul>
<p><b>A river's drainage basin</b></p> <ul style="list-style-type: none"> <li>Drainage basin</li> <li>Watershed</li> <li>Source</li> <li>River channel</li> <li>Confluence</li> <li>Tributaries</li> <li>Mouth</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Accurately <b>draw</b> and <b>label</b> a river's drainage basin and <b>define</b> the keywords</li> <li>⇒ <b>Explain</b> why the size, shape and geology of a river's drainage basin affects people and places</li> </ul>
<p><b>River processes</b></p> <ul style="list-style-type: none"> <li>Erosion (hydraulic action, abrasion, attrition, solution)</li> <li>Transportation (traction, saltation, suspension, solution)</li> <li>Deposition</li> <li>Velocity (speed)</li> <li>Discharge (volume of water)</li> </ul>	<ul style="list-style-type: none"> <li>⇒ <b>Identify</b> and <b>define</b> the different river processes</li> <li>⇒ <b>Explain</b> how changes in the hydrological (water) cycle and differences in a river's drainage basin affect river processes</li> </ul>
<p><b>River landforms</b></p> <ul style="list-style-type: none"> <li>V-shaped valleys and interlocking spurs</li> <li>Waterfalls and gorges</li> <li>Meanders and ox-bow lakes</li> <li>Floodplains and levees</li> <li>Deltas and estuaries</li> <li>Bedload, suspended load and solute load</li> </ul>	<ul style="list-style-type: none"> <li>⇒ <b>Identify</b>, accurately <b>draw</b> and <b>label</b> river landforms, including the use of OS maps and images</li> <li>⇒ <b>Explain</b> how river landforms are formed by different river processes</li> <li>⇒ <b>Explain</b> how geology, velocity, discharge and drainage basin size and shape affect the formation of river landforms</li> </ul>
<p><b>River long and cross profiles</b></p> <ul style="list-style-type: none"> <li>Processes and landforms in the upper, middle and lower courses of a river, including channel width and depth</li> <li>Gradient, velocity and discharge changes of a river</li> </ul>	<ul style="list-style-type: none"> <li>⇒ <b>Describe</b> the changes in a river's long profile as it flows downstream</li> <li>⇒ <b>Describe</b> the changes in a river's cross profile as it flows downstream</li> <li>⇒ <b>Explain</b> how geology, velocity, discharge and drainage basin size and shape affect the shape, width and depth of river's long and cross profiles</li> </ul>
<p><b>Hydrographs and flooding</b></p> <ul style="list-style-type: none"> <li>Peak rainfall and peak discharge</li> <li>Lag time</li> <li>Physical and human causes of river flooding</li> <li>Hard and soft engineering methods of flood management, including sustainability</li> <li>Contrasting Case Studies of river flooding</li> </ul>	<ul style="list-style-type: none"> <li>⇒ Accurately <b>draw</b>, <b>label</b> and <b>analyse</b> a flood hydrograph</li> <li>⇒ <b>Explain</b> how geology, velocity, discharge and drainage basin size and shape affect the risk of river flooding</li> <li>⇒ <b>Explain</b> how climate change affects the risk of river flooding</li> <li>⇒ <b>Evaluate</b> methods of river flood management</li> <li>⇒ <b>Assess</b> the causes, impacts and management of river floods in contrasting environments</li> </ul>
<p><b>How are humans changing river environments?</b></p> <ul style="list-style-type: none"> <li>The UK's chalk streams are being affected by the way communities and governments interact with them.</li> <li> Case Study and fieldwork investigation: The River Cray</li> </ul>	<ul style="list-style-type: none"> <li>⇒ <b>Describe</b> the importance of the UK's chalk streams on local, national and global scale</li> <li>⇒ Investigate the characteristics and features of the River Cray through fieldwork</li> <li>⇒ Present and analyse fieldwork data and evaluate fieldwork methods</li> </ul>



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

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

Draw and label diagrams to show the 4 erosion processes

Draw and label a diagram of a waterfall, showing permeable and impermeable rock

Draw and label diagrams to show the 4 transportation processes

Draw and label a diagram of a meander, showing the location of erosion and deposition processes

Explain why different types of sediment are deposited in different places in a river

Explain how levees are formed

Complete the table below to show how a river changes as it flows downstream

State the physical and human causes of river flooding

Feature	Upper course size and shape	Middle course size and shape	Lower course size and shape
Gradient			
Channel width			
Channel depth			
Velocity			
Discharge			

What is sustainable flood management?