



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



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?