KS3 Geography: Explain this...

River flooding

River flooding occurs when the river water rises so high it breaches the riverbank and overflows onto the land around it.

It usually happens a couple of days after heavy rainfall. You might ask why flooding happens after and not during heavy rainfall. It's because it takes time for rainwater to flow downstream, via many small streams from higher ground, to join the main river below. Flooding occurs when the collective volume of water becomes too much for the river to hold.

The same thing happens when the snow melts on the tops of hills and mountains. The meltwater flows downhill, adding to the volume of water in the river system, which can lead to flooding downstream in the days that follow.

Flood plains are areas of land around rivers where water can overspill at times of flooding.

If flood plains are left undeveloped, water can spill onto them to protect houses and buildings further downstream. Eventually, the water seeps back into the river or into the ground.

If there isn't a flood plain, or when a flood plain has been built on, problems can arise. This is a particular problem for towns and cities that have rivers running through them.

Flood water can't seep through concrete or tarmac, so gets higher and higher, often flooding people's homes and businesses.

Rivers forge a natural course through the landscape. Sometimes, humans intervene to alter this natural path, but this can often increase the risk of flooding.

The Mississippi River in the southern United States is a good example of this. It is one of the most engineered rivers in the world, and researchers believe that up to three quarters of severe flooding incidents on the Mississippi in the last one hundred years have been a direct result of human engineering, including attempts to straighten the river for easier shipping and transport.

Sometimes man-made defences, such as *levees* - banks built to stop water from flooding out of the river - even trap floodwater and prevent it from returning to the river.

Where rivers are straight, water flows more quickly so there is little risk of flooding upstream. However, the faster flow downstream means the river is more powerful there and erosion stronger, making the risk of flooding greater.

River floods can be destructive to homes and businesses and even a threat to human life.