

Erosion is the wearing away of the river's bed and banks, and even the rocks it carries.

One key erosion process is hydraulic action.

This is when the sheer power of fast-flowing water forces air into cracks in the river's bed and banks, weakening and breaking them apart.

The process of abrasion acts like sandpaper.

Material such as sand, gravel and pebbles carried by rivers, scrapes against the beds and banks, wearing them down to gradually deepen and widen the river channel.

Another erosion process is attrition when rocks collide with each other while being transported in the river.

Over time, these rocks become smaller, smoother and more rounded.

Finally, there is solution, a chemical erosion process.

Solution is when minerals dissolve in river water and are carried invisibly.

Rainwater absorbs carbon dioxide to form weak carbonic acid, making rivers slightly acidic.

This dissolves calcium carbonate in rocks like chalk and limestone.

The geology of the river valley affects how quickly all four erosion processes happen.

Softer rocks like clay are worn away quickly.

Harder rocks like granite resist erosion and so the landscape is shaped more slowly.

Learning about these four erosion processes, hydraulic action, abrasion, attrition and solution helps us to understand how rivers constantly change the land.