Upper Course - Landforms

Learning Objective:

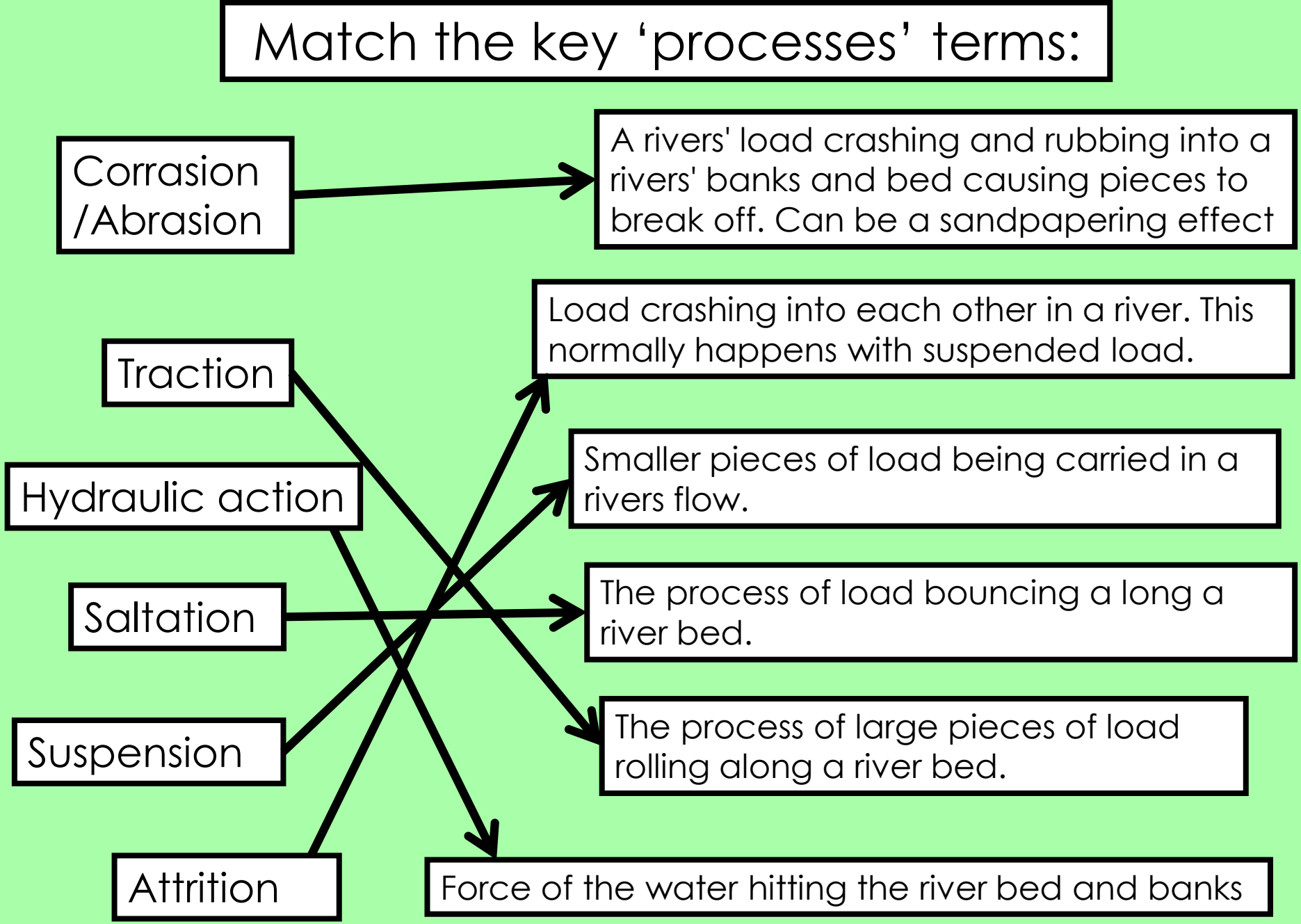
- **Examine** the *formation* of landforms

Learning Outcomes:

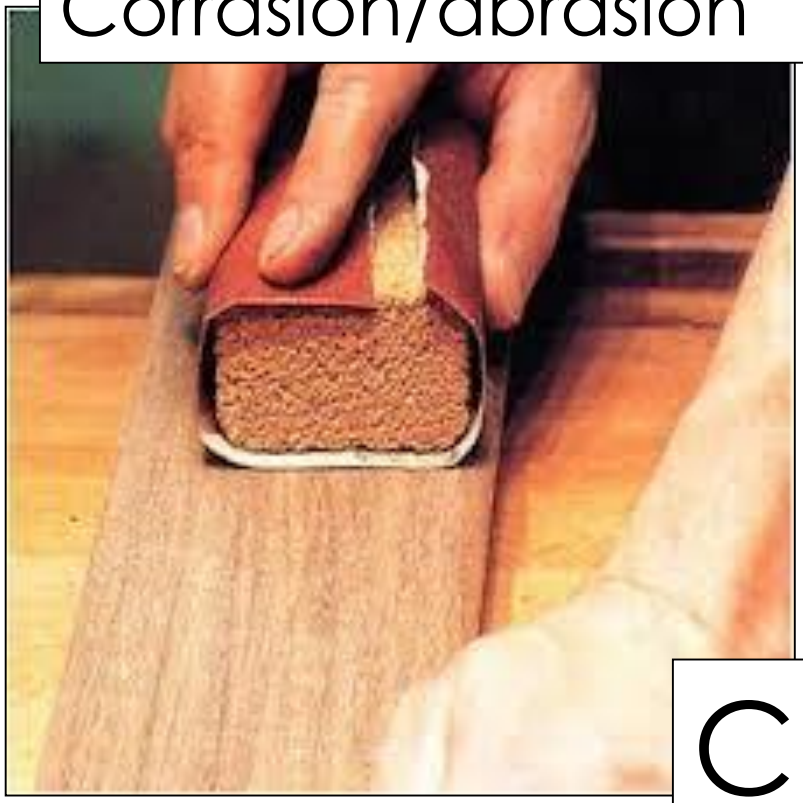
- **Recall** how rivers erode
- **Explain** how interlocking spurs and waterfalls can form
- **Suggest** what happens when a waterfall retreats

Key features of this valley?

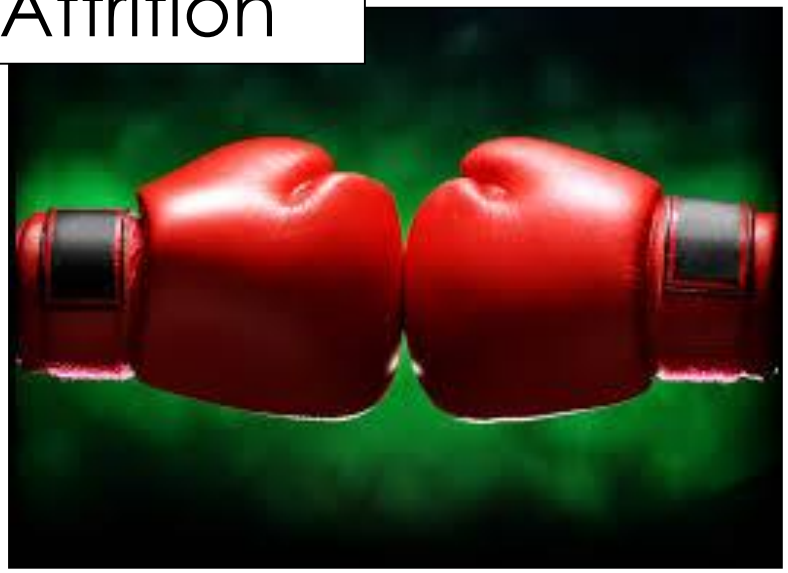
Match the key 'processes' terms:



Corrasion/abrasion



Attrition



C.A.S.H

Solution

Hydraulic action

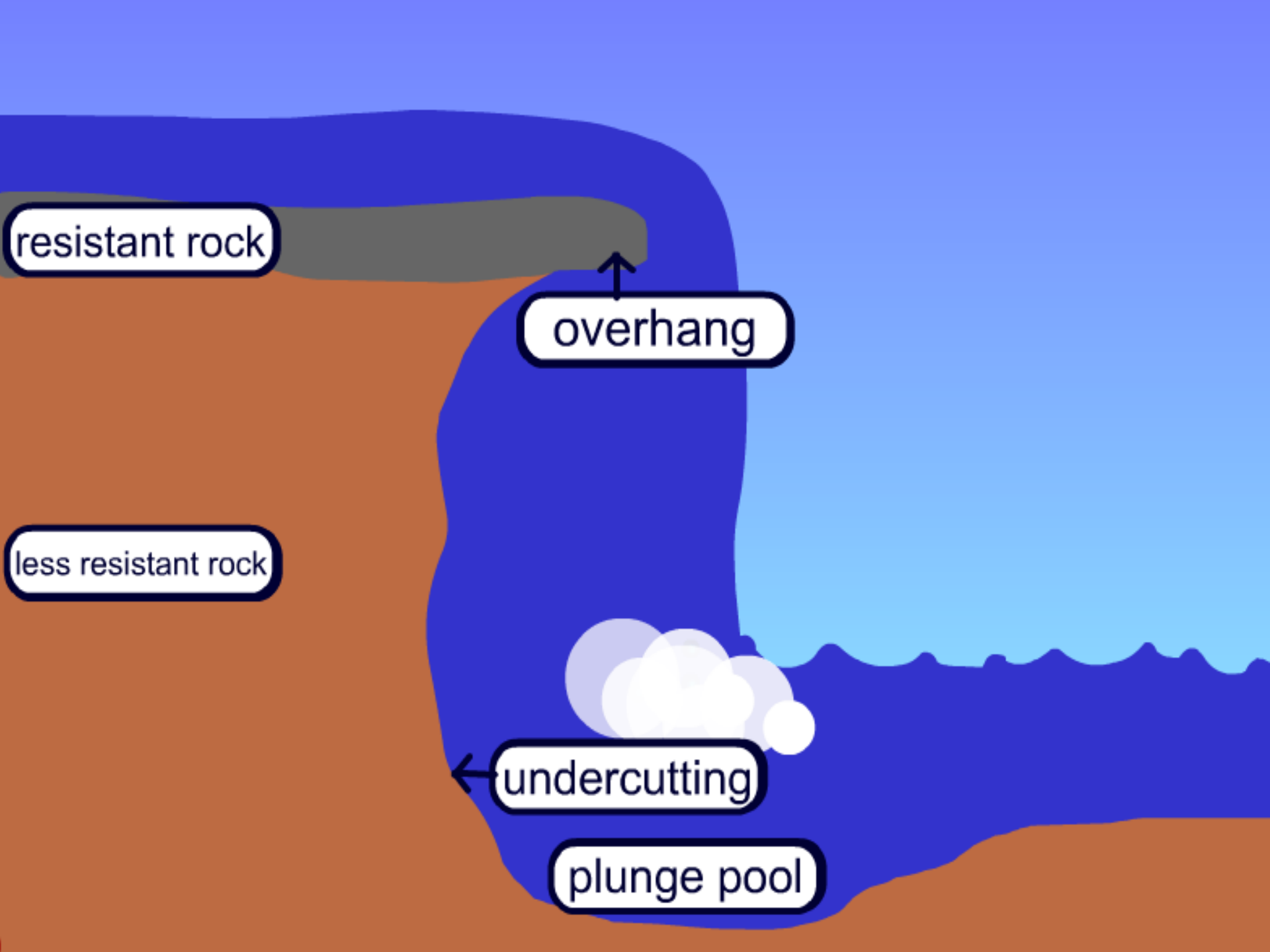
Interlocking spurs – note the '***fingers'*** of land that jut out. The river is *not powerful* enough to cut through the **'*spurs*'** of land so it flows around them.
What would they look like if you were above them?

Disney · PIXA
UP

Niagara Falls

Niagara Falls

Niagara Falls – turned off in 1969, why...?


resistant rock
overhang
less resistant rock
undercutting
plunge pool

Draw 3 diagrams to illustrate the formation of a waterfall

1. Before any undercutting
2. During some undercutting
3. Once the overhang collapses

Keywords:

softer rock, harder rock, weaker, resistant, turbulent water, overhang, collapse, undercutting, pebbles, stones, boulders, hydraulic action, corrasion, erosion, plunge pool,

Explain the formation of a gorge.

(6 marks)

A gorge is formed from a retreating waterfall. First when there is a layer of hard rock above a layer of soft rock, water travels over the hard rock and falls. Pieces of sediment erode the soft rock through hydraulic action. This is the force of the water hitting the river bed and banks when the water is moving fast.

This causes the soft rock to undercut and the heavy hard rock becomes unstable as it is unsupported. Due to the force of gravity this will collapse and force the waterfall to retreat. As the waterfall retreats it leaves steep valley sides. This feature is the gorge.

High Force Waterfall – River Tees