

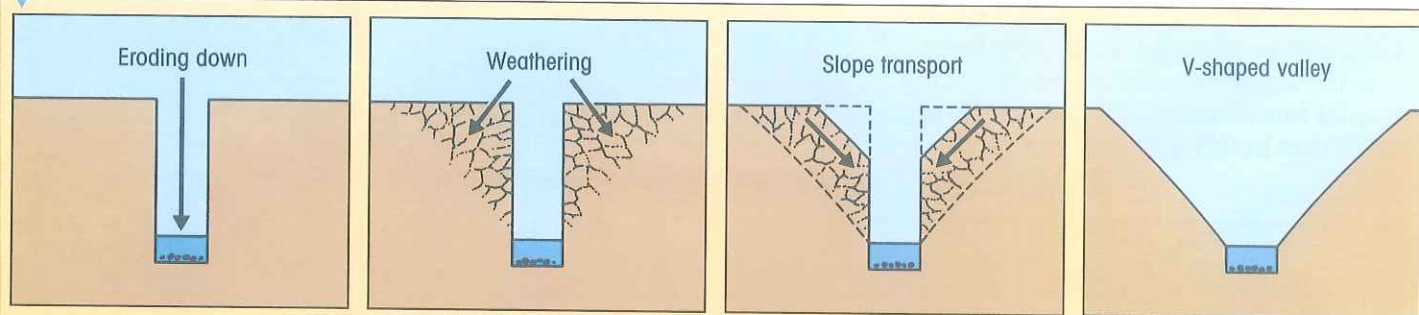
## How do rivers shape the land?

Rivers work hard. They hardly stop and they continually erode and move material downstream. They are a major force in shaping and altering the land. Running water by itself actually has little power to wear away rocks. What happens is that the water pushes boulders, stones and rock particles along the river's course. As it does so, the loose material scrapes the river bed and banks and loosens other material. Much of what is worn away is then transported by the river and put down

somewhere else. In this way rivers can wear out and deepen valleys. They can also change their shape by depositing material.

The landforms to be seen along a river change as it flows from source to mouth. These two pages explain the features of a river in its upper course which is usually in the hills or mountains. Diagram A and photo B show how a river cuts out a steep-sided valley that is V-shaped.

A



**1** The river erodes downwards as boulders, stones and rock particles are bounced and scraped along the channel bed.

**2** As the river cuts down, the steep sides are attacked by weathering. This breaks up and loosens the soil and rock.

**3** The loosened material slowly creeps down the slope because of gravity or is washed into the river by rainwater. The river carries it away.

**4** The end result is a steep-sided valley that has the shape of a letter 'V'.

B

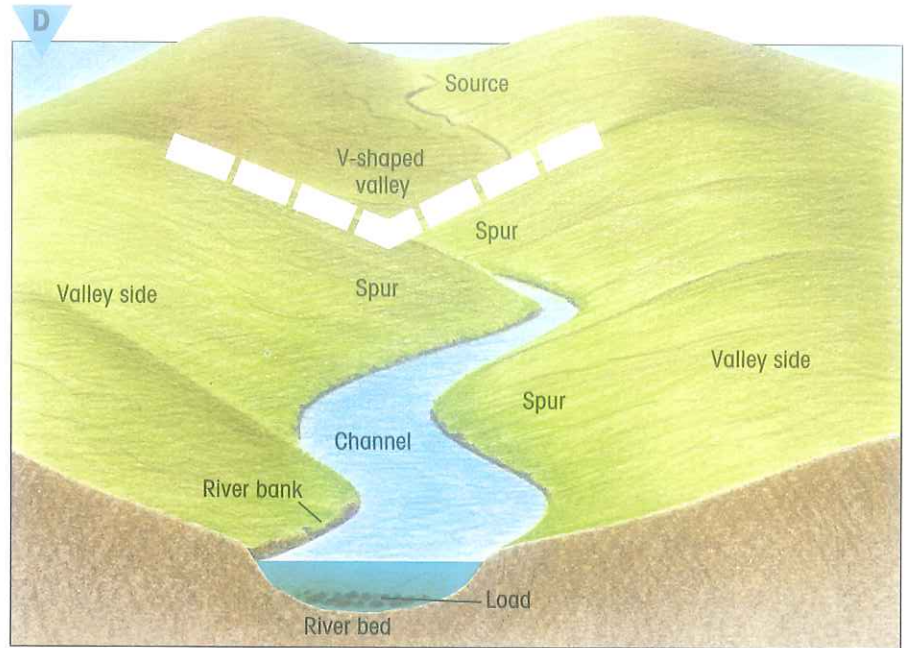
### The making of a V-shaped valley





Table C below and sketch D give some features of a river and its valley.

<b>Source</b>	Where a river starts
<b>Spurs</b>	Ridges of land around which a river winds
<b>Valley sides</b>	The slopes on either side of a river
<b>V-shaped valley</b>	The shape of a valley in its upper course
<b>Channel</b>	The course of a river
<b>River banks</b>	The sides of a river channel
<b>River bed</b>	The bottom of a river channel
<b>Load</b>	Material that is carried or moved by the river

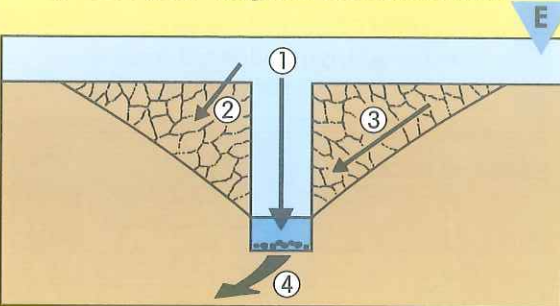


## Activities

- 1 Describe how rivers erode their channels. Include these words in your description:

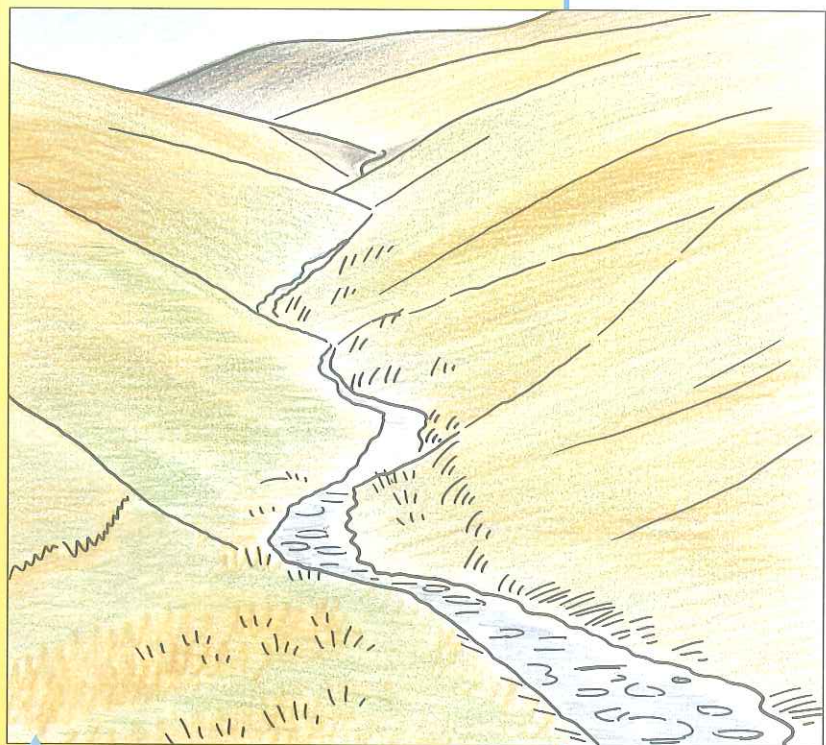
pushes   scrapes   loosens   moves   drops

- 2 a) Make a large copy of diagram E.  
 b) Show how a valley gets to be V-shaped by describing what happens at ①, ②, ③ and ④.  
 c) Give your diagram a suitable title.



- 3 a) Sketch F is a simplified drawing of the river valley shown in photo B. Make a copy of the sketch.  
 b) Add the terms below to your sketch in the correct places. The information at the top of this page will help you.

river channel   river bank   load  
 valley side   spur   V-shaped valley



## Summary

Rivers erode, transport and deposit material. This helps shape the land. V-shaped valleys are a common feature of a river in its upper course.