



If you are fossicking for gold nuggets in a stream bed, your best chance is where water has been slowed by a barrier or under a waterfall, as the heavier masses are the first to be dropped out. Some lighter material will also be deposited. In general, the further from the source the finer the grain size of the sediment.

Your Task

A scientist took samples of sediment from a river in the Sydney basin. One sample was taken from a downhill stream on the Cumberland plain and another inland at the edge of the Blue Mountains. Unfortunately, the labels fell off the bags.



The scientist has used sieves to separate the different sizes of grains and has determined the mass of each grain size for both samples. Your task is to work out which sample came from the plains by creating a column graph of the data below and interpreting the sediments.

Data

Sample A		Sample B	
Grain Size (mm)	Mass (g)	Grain Size (mm)	Mass (g)
>32	600	>1	300
16-32	1 000	0.5 – 1	700
8 – 16	1 400	0.25 – 0.5	1 500
4 – 8	1 500	0.12 – 0.25	1 300
2 – 4	1 400	0.06 – 0.12	2 200
1 – 2	1 400	0.03 – 0.06	3 400
0.25 – 0.5	900	<0.03	600
<0.5	1 600		

Conclusion

Sample _____ was from the plain because _____

Reference:

Lavinsky R (2010). Gold (The Providence Nugget) (image). Wikimedia Commons.