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Activity

Hydrographs

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Read the Geographical Skills column in WIDELAND Vol. 33, No. 1. This activity sheet will invite you to practise drawing and interpreting your own hydrograph.

Step 1

Use the article to draw your hydrograph axes on graph paper using a ruler and a pencil. Be very careful to count the small squares accurately and ensure both of your axes are labelled and your graph has the title 'Flood hydrograph for River End on 12 December 2020' (NB. This is an imaginary flood event and river).

Step 2

Start with the precipitation data in the table below. Plot this onto your graph as bars using the correct axis, a ruler and a sharp pencil.

Time	9–10 a.m.	10–11 a.m.	11–12 p.m.	12–1 p.m.	1–2 p.m.	2–3 p.m.	3–4 p.m.	4–5 p.m.	5–6 p.m.
Precipitation (mm)	10	15	25	30	20	10	5	0	0

Step 3

Now, use the discharge data below to draw your line graph. Remember to use a small, neat dot for each data point, before carefully joining them together with a neat pencil line.

Time	8 a.m.	10 a.m.	12 p.m.	2 p.m.	4 p.m.	6 p.m.	8 p.m.	10 p.m.	12 a.m.	2 a.m.	4 a.m.
Discharge (cumecs)	5	10	15	20	40	60	50	40	30	20	10

You should now have a completed hydrograph.

Use the article to now label the following features on your graph:

- Peak rainfall
- Rising limb
- Peak discharge
- Falling limb
- Lag time
- Base flow (normal flow)

Questions

- 1 Using data from your graph as evidence, explain whether you think it is a flashy or slow response hydrograph.

I think this is a _____ hydrograph because...

- 2 Use the article and your graph to explain why you think River End might have this type of flood hydrograph.

THINK: What is the surrounding relief, land use and bed rock like?