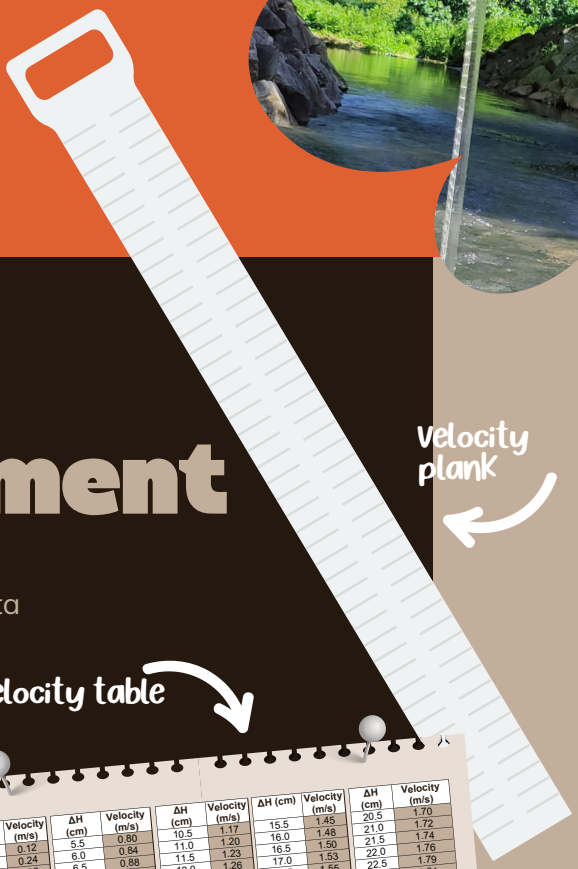
Velocity Plank

Measure Velocity Of River Flow



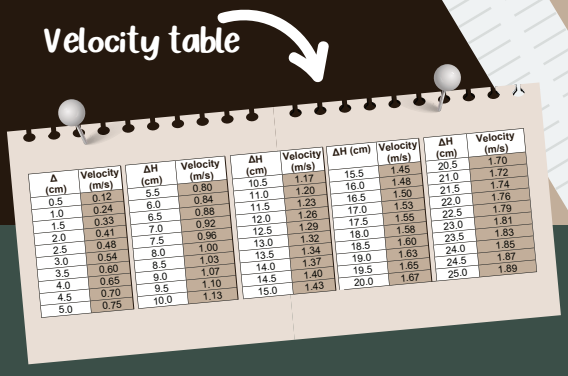
Equipment

Velocity plank
Notepad to record data
Velocity table



What is the velocity plank? It is a 1 metre transparent ruler.

Why do we use it? It is used to calculate water depth, velocity and water discharge. **What is velocity of the river flow?** It is the speed at which water flows along the river.



Δ (cm)	Velocity (m/s)	ΔH (cm)	Velocity (m/s)	ΔH (cm)	Velocity (m/s)	ΔH (cm)	Velocity (m/s)	ΔH (cm)	Velocity (m/s)
0.5	0.12	5.5	0.80	10.5	1.17	15.5	1.45	20.5	1.70
1.0	0.24	6.0	0.84	11.0	1.20	16.0	1.48	21.0	1.72
1.5	0.33	6.5	0.88	11.5	1.23	16.5	1.50	21.5	1.74
2.0	0.41	7.0	0.92	12.0	1.26	17.0	1.53	22.0	1.76
2.5	0.48	7.5	0.96	12.5	1.29	17.5	1.55	22.5	1.79
3.0	0.54	8.0	1.00	13.0	1.32	18.0	1.58	23.0	1.81
3.5	0.60	8.5	1.03	13.5	1.34	18.5	1.60	23.5	1.83
4.0	0.65	9.0	1.07	14.0	1.37	19.0	1.63	24.0	1.85
4.5	0.70	9.5	1.10	14.5	1.40	19.5	1.65	24.5	1.87
5.0	0.75	10.0	1.13	15.0	1.43	20.0	1.67	25.0	1.89

01

Selecting the location. Decide which part of the river to take the measurement. **Identify** a spot that is representative. E.g. if the flow is fast, choose a place where the water flows fast. **Teamwork.** Ensure that there is a minimum of 2 persons to take the measurements.

Record river name, date, time, organisation data collector name. Site description e.g. near farm / house, deforestation. **Weather** e.g. sunny, cloudy. **River condition** e.g. slow flow, rocky, sediment, visible pollution.

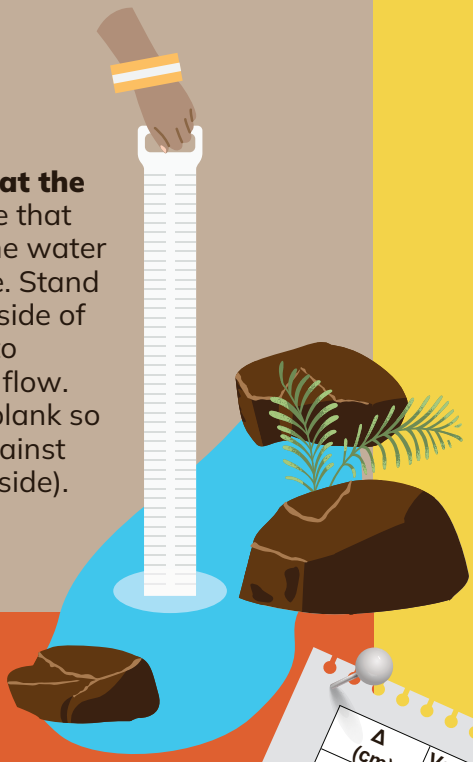
02

Secure the velocity ruler. Strap the plank's bracelet to your arm.



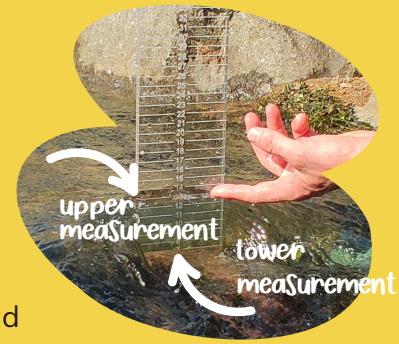
03

Position the plank at the chosen spot. Ensure that no one is blocking the water flow from the source. Stand at a distance at the side of the plank so as not to interfere with water flow. Check & adjust the plank so that the flow hits against the surface (not the side).



04

Taking measurement. The person who is NOT holding the ruler, reads the two measurements (to avoid moving the ruler): bend down to read the measurements on the surface of the ruler facing the: i) source; ii) river mouth.



Record the reading. If another person is writing the measurement, repeat the measurement to ensure the correct entry.

05

Calculating velocity. These measurements are inputted in a table that automatically calculates the velocity at this point in the river.

Future readings. Take readings at the same location over time to assess trends in water velocity or at different locations to compare water velocity at different locations.

Δ (cm)	Velocity (m/s)
0.5	0.12
1.0	0.24
1.5	0.33
2.0	0.41
2.5	0.48
3.0	0.54
3.5	0.60
4.0	0.65
4.5	0.70
5.0	0.75

06

Cleaning and Storing the velocity plank. Rinse the velocity plank with clean water to prevent contamination and store safely.

Clean Rivers, Healthy Lives

Refer to the River Health and Safety Training Manual by Gaea Seychelles

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