

How to measure water depth in an urban channel?



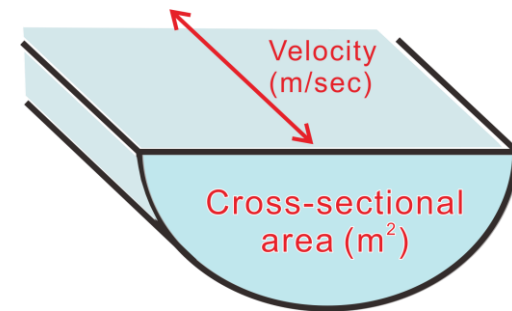
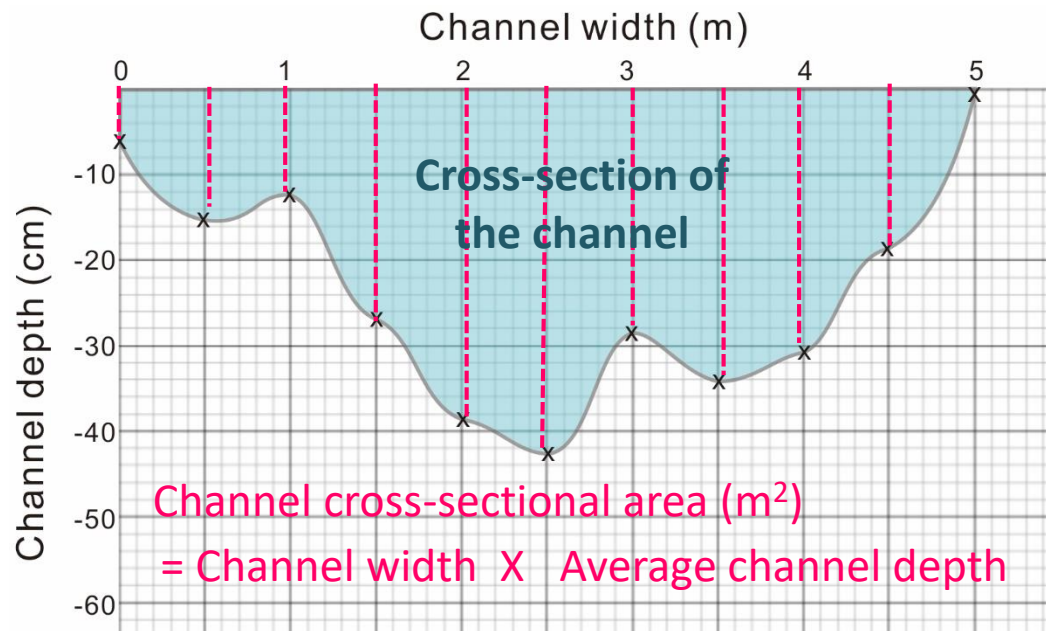
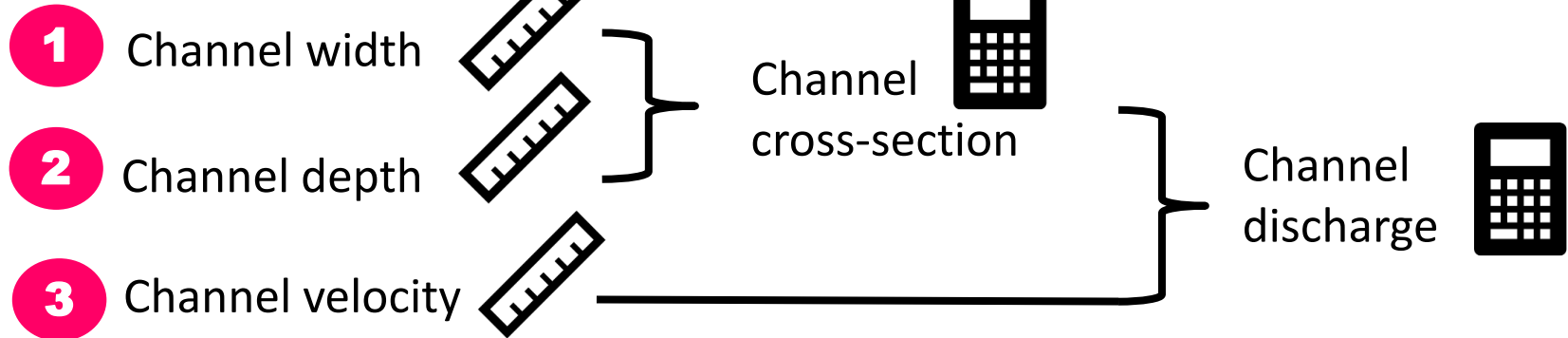
JC-WISE
Water Initiative on
Sustainability and Engagement
賽馬會惜水・識河計劃



明愛陳震夏郊野學園
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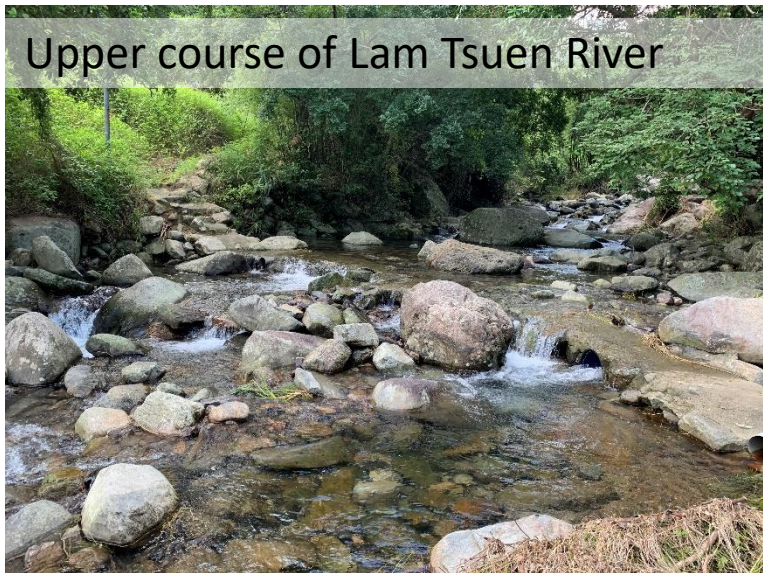
Measuring the **depth of water** in a river channel

➤ By Measurement



River channel

Upper course of Lam Tsuen River



Equipment/ tools

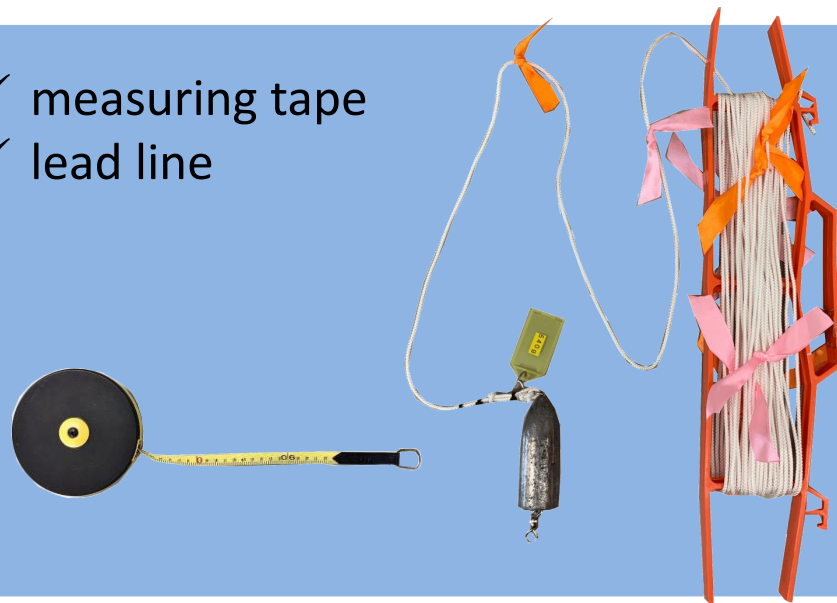
- ✓ measuring tape
- ✓ meter ruler



Lower course of Lam Tsuen River

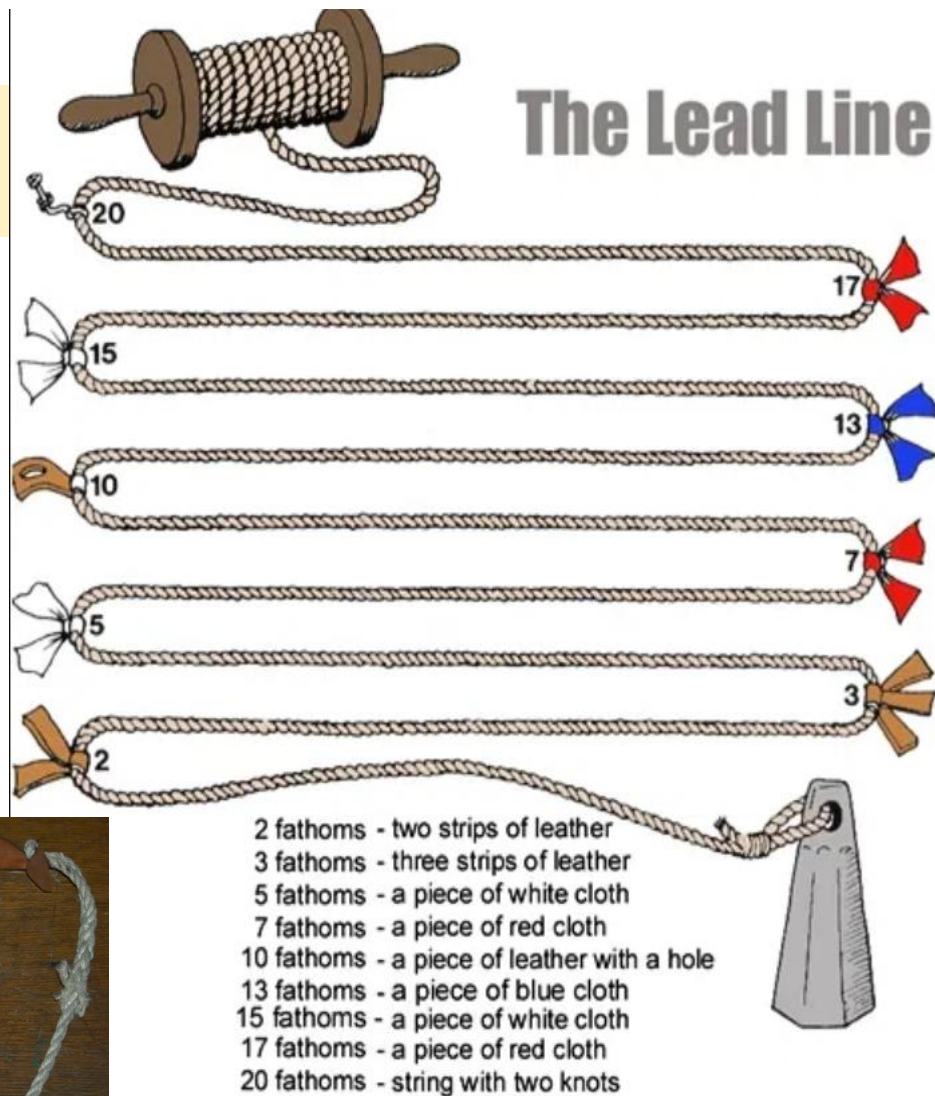
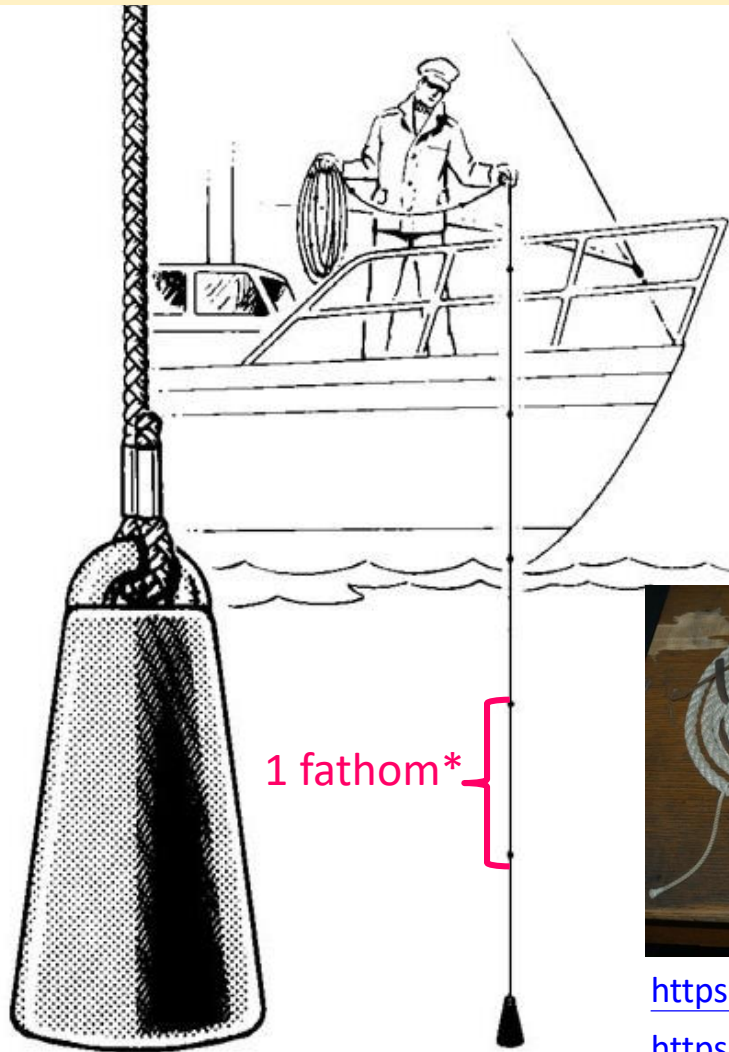


- ✓ measuring tape
- ✓ lead line



ONE OF THE OLDEST INVENTIONS IN NAVIGATION

- measure the depth of the sea water
- determine the characteristics of the sea floor



**1 fathom = 6 feet*

<https://seahistory.org/sea-history-for-kids/leadline/>

<https://coastalsafety.com/sea-mile-nautical-measurements-cable-fathom-chain/>

▼ Lam Tsuen River



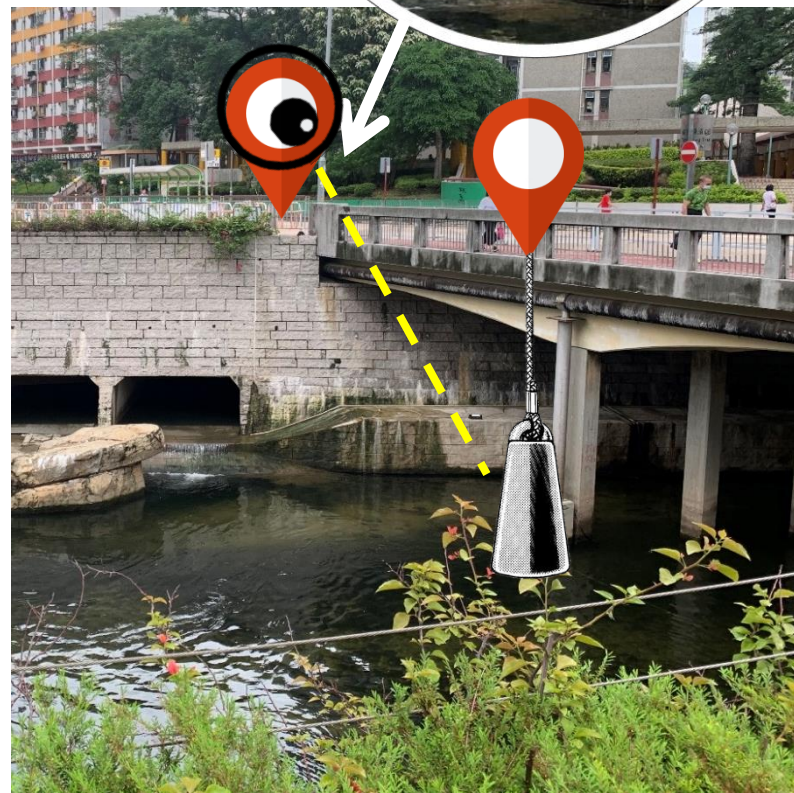
Measurer's position



Observer's position



▼ Kai Tak River



LEAD LINE

Ribbons at every 0.5 meter
(Optional)

Stretch-resistant rope
(Suggest: 15-20 meter)

Rope winder

◀ The Lead Line made by:
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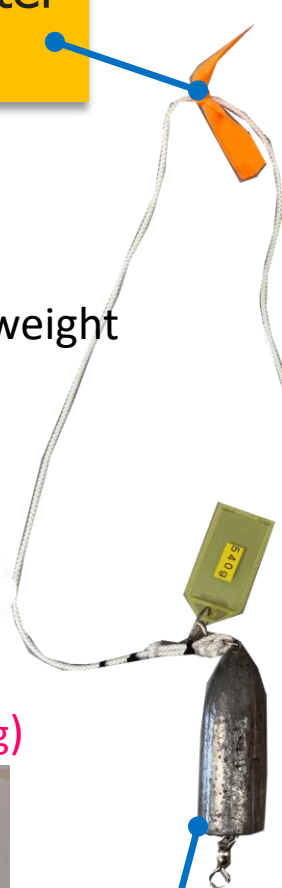
Sounding lead weight
(Suggest: 500g- 1500g)

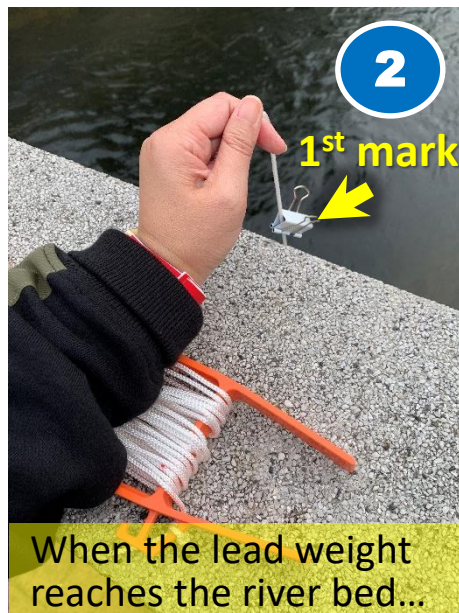
▼ Diving lead weight
(500-4000g)

▼ Mushroom anchor
(5-30 lb)

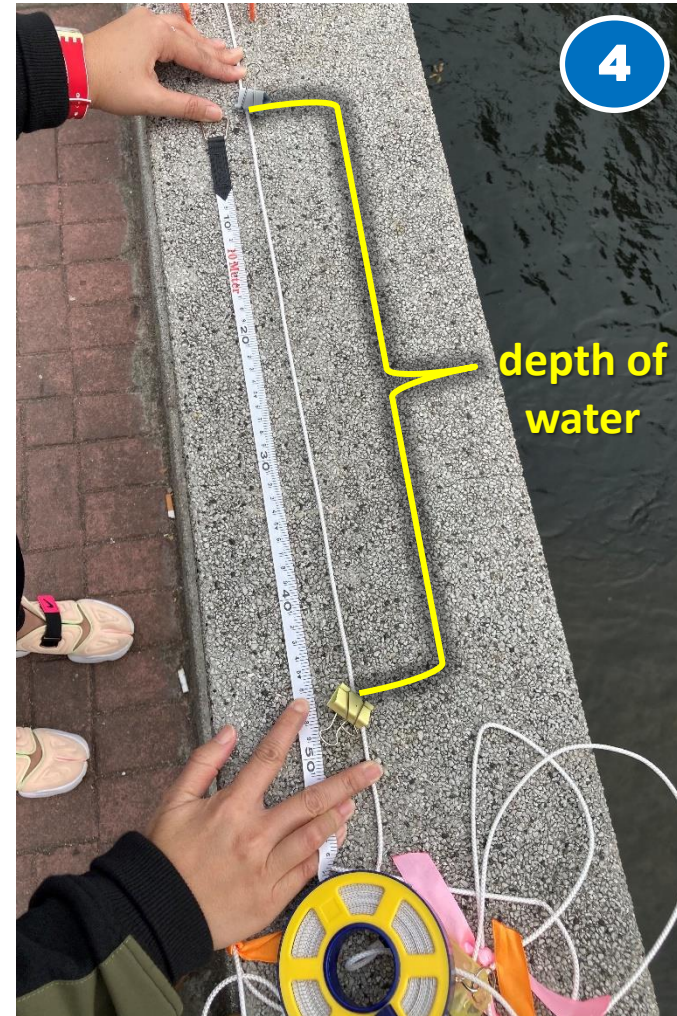


▼ Fishing weight sinker (10-2000g)





MEASURING PROCEDURES



Measuring the **flow velocity** in a river channel



▼ laser distance meter/
range finder



References

- Sultana Education Foundation (2020, April 8). *Using a lead line to test the water's depth* [Video file]. Retrieved from <https://www.youtube.com/watch?v=3xaYVxIntpA>
- National Maritime Historical Society. Sea History for Kids. Retrieved from <https://seahistory.org/sea-history-for-kids/leadline/>
- Coastal Safety-Boat Captain Sea School. *The Lead line* [Graphic]. Retrieved from <https://coastalsafety.com/sea-mile-nautical-measurements-cable-fathom-chain/>