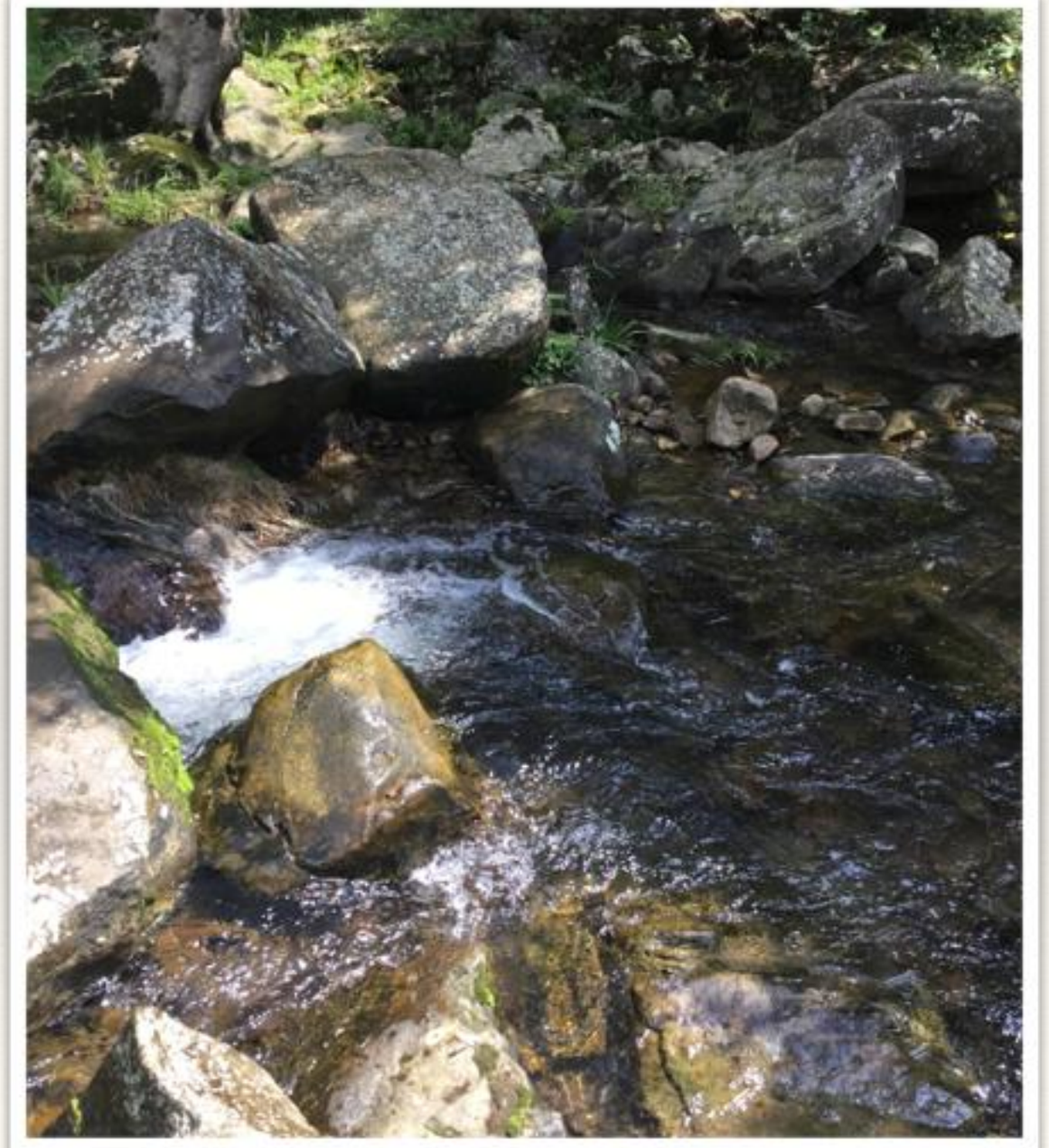
School name

Correlation of different water flow rate with the number of species and stream animals.

Leung Wing Chun
Wu Wai Kuen
Lee Sze Ying
Wong Yuk Ming

Idependent variable

- Water Flow rate
- 0.15-0.40 mps
- Tools and method:water flow meter
- Method:Measure the water flow rate in different place of the quadrat and take an average



Dependent variable

- Number of animals and species
- Method:take photo and use method of counting

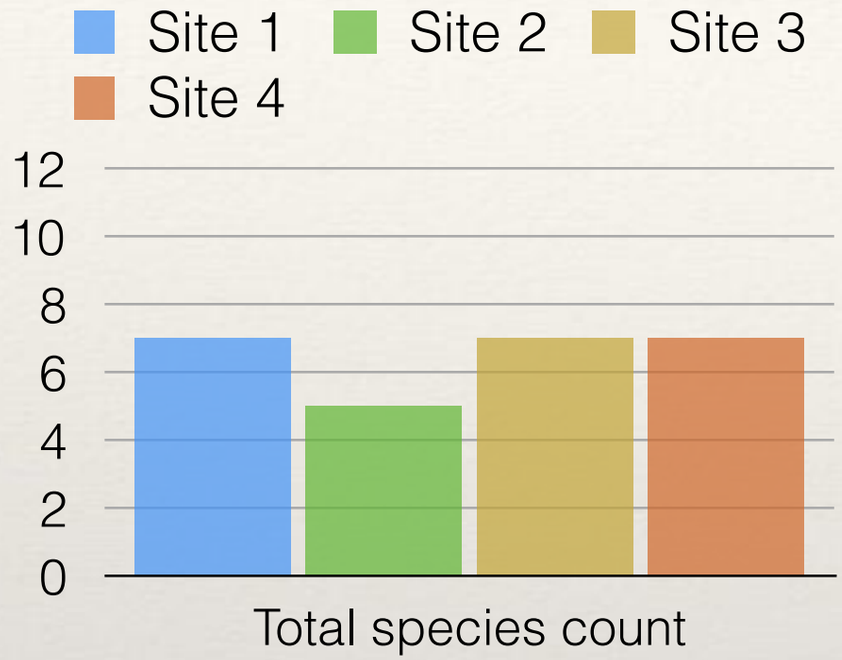
Controlled variables

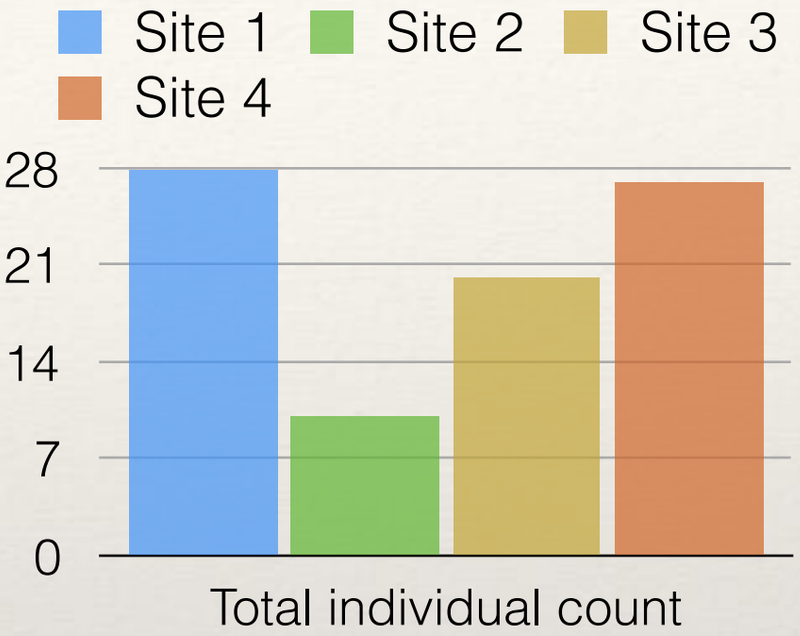
- Temperature
- Method:Digital thermometer
- River flow rate
- Method ：water flow meter
- light intensity
- pH

Results

	Site 1	Site 2	Site 3	Site 4
Mayfly Nymph	5	3	5	4
Stonefly Nymph	1	1	4	2
Caddisfly larva	1	1	1	2
Reservoir Snail	17	4	3	14
Large Stream Snail	1	1	2	1
Goby	2	0	0	3
Bee Shrimp	0	0	3	0
Water Penny	0	0	2	0
Water Skater	1	0	0	1
Water Bettle	1	0	0	0
Total species count	7	5	7	7
Total individual count	28	10	20	27

Summary of results





- Site 1&4 are in slow water flow rate.
- Site 1: 0.19 mps
- Site 4: 0.15 mps
- Site 2&3 are in fast water flow rate.
- Site 2: 0.31 mps
- Site 3: 0.40 mps

Summary of results

- The average species count of fast water flow rate is 6 while the average species in slow water rate is 7.
- It shows that the slower the water flow rate is, there are slightly more species in the river.
- For example, we can only find water skater in slow flow rate but none in fast flow rate.

Summary of results

The average individual count in fast flow rate is 15 while the average individual count in slow flow rate is around 28.

It shows that there are more stream animal live in the region of river with slow flow rate.

Summary of results

Most of the stream animal live in slow flow rate. Like Nymph, snail and little fish, they don't have the ability against with the force in fast water flow rate.

However, there are few stream animals that live in fast water flow rate like Water Penny. It has strong sucker to suck the rock, prevent them form flush away by the strong water flow.

Conclusion

- The higher the water flow rate is, the fewer the stream animals are.
- The higher the water flow rate is, the fewer the species are.