



Study of a Freshwater Stream Ecosystem

(Effects of water flow on animals)

Background information:

Water flow is one of the most important abiotic factors affecting living organisms in a freshwater stream ecosystem. Freshwater stream animals responses to water flow in various ways. Diversity, abundance, morphology and behaviour of animals are all affected.

Task:

Design and carry out an investigation to find out how are the freshwater stream animals be affected by the water flow.

Write a full report for your investigation work and your findings.

Available equipment and material:

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|---------------------------------------------------------------|-----------------------------------------------|
| 1. Water flow meter (current meter) | 2. Water sampling bottle |
| 3. Quadrat(0.5 m X 0.5 m) | 4. Sorting tray (White Plastic Tray) |
| 5. Aquarium net | 6. Metal sieve |
| 7. Brush pen | 8. Forceps |
| 9. Magnifying glasses | 10. Vials (5 pcs) |
| 11. Dissolved oxygen meter (to be used in Lab.) | 12. pH meter (to be used in Lab.) |
| 13. Total Dissolved Solids meter (to be used in Lab.) | 14. Water filtration set (to be used in Lab.) |
| 15. Filter paper in the oven (to be used in Lab.) | |
| 16. Compound microscope and glass slides (to be used in Lab.) | |
| 17. Standard glasswares (to be used in Lab.) | 18. "Hillstreams" (Book) |
| 19. " Wildlife Pictorial Guide" (Book) | |

Some items listed above may not be useful, students should decide what to be used. Additional equipment or material can be provided upon request, as long as the request item is available.

Procedure and time arrangement:

1. Group discussion and formulation of investigation plan - 50 mins
2. Distribution of equipment - 10 mins
3. Field work - 90 mins
4. Laboratory work - 60 mins
5. Group discussion and interpretation of results - 90 mins
6. Write up the full report

