Chapter 14 Water Pollution

Macroinvertebrates and Water Quality

Macroinvertebrate Name	Point Value	Macroinvertebrate Name	Point Value
Aquatic Worm	0	Leech	2
Blackfly larva	6	Lunged snail	4
Caddisfly larva	10	Mayfly nymph	10
Cranefly larva	8	Midgefly larva	5
Crayfish	6	Planarian	0
Damselfly nymph	6	Riffle Beetle larva	10
Dobsonfly larva	10	Stonefly nymph	10
Fishfly larva	6	Water Penny larva	10
Grilled Snail	4		

Biotic Water Quality Score

80-100	Non-impacted (excellent water quality)
60-80	Slightly-impacted (good water quality)
40-60	Moderately-impacted (fair water quality)
0-40	Severely-impacted (poor water quality)

1. How are macroinvertebrates used to determine water quality?

2. What type of conditions could exist that make it difficult for some macroinvertebrates?

3. You have just collected six water samples from 6 different locations around East Greenwich which include both streams, brooks and ponds. Use Google maps to identify these 6 locations

Sample 1 Location: _____

Sample 2 Location: _____

Sample 3 Location: _____

Sample 4 Location: _____

Sample 4 Location: _____

Sample 6 Location: _____

4. Using the key provided, identify each species and then create a data table to record the following information:
        * Sample number.
        * The number and type of each macroinvertebrate collected in each sample.
        * Point value for each macroinvertebrate (use the chart above for values)
        * Total point value which is called the **Biotic Water Quality Score**

5. Rank your sample locations from best to worst based on their **Biotic Water Quality Score.** Examine sample locations using Google maps on Mr. Rath's website (link) What factors do you think led to either the fair to excellent Biotic Water Quality Score?