



Partner names: _____

Calculating a Biotic Index from Stream Macroinvertebrates

1. Identify the macroinvertebrates in your “stream” using the dichotomous key provided.
2. In the chart on reverse, put a check next to the name of all the macroinvertebrates you found.
3. Add up the number of checks in each column. This is the number of TAXA (different kinds of) macroinvertebrates that belong to that group.
4. Multiply the number of taxa by the group’s weighting factor. This gives you the **GROUP SCORE**.
5. Add up all the group scores. This will give you the **TOTAL GROUP SCORE**.
6. Add up the number of taxa from all the columns. This is the **TOTAL NUMBER OF TAXA**.
7. Divide the total group score (from step 5) by the total number of taxa (from step 6). This will give you the **WATER QUALITY INDEX** for your stream.
8. Using the table at the bottom right of the page, find how the stream’s water quality index ranks.

	Group A Pollution intolerant	Group B Tolerant to a small amount of pollution	Group C Tolerant to a fair amount of pollution	Group D Very pollution tolerant
Macroinvertebrate taxa (put a check mark if you have at least one in your sample)	Stonefly ___ Dobsonfly ___ Alderfly ___	Mayfly ___ Caddisfly ___ Damselfly ___ Dragonfly ___ Crane fly ___ Clam/mussel ___ Crayfish ___ Beetle ___	Scud ___ Midge ___ Blackfly ___ Sowbug ___	Aquatic worm ___ Leech ___ Snail ___
# of taxa (add up checks)				
Weighting factor	X 1	X 2	X 3	X 4
Group score (multiply # of taxa with weighting factor)				

Total Group Score (add up individual group scores from 4 bottom boxes)		Water Quality (circle one) Excellent 1.0 - 2.0 Good 2.1 - 2.5 Fair 2.6 - 3.5 Poor 3.6 or above
Total Number of Taxa (add up the # of taxa checked in all columns)		
Water Quality Index (Total Group Score ÷ Total Number of Taxa)		