Hypothesized HBI score = Your HBI score = Class average HBI score =

Bioassessment Index Worksheet					
Order/Group (i)	Tolerance Value (a)	Specimens (n)	Product (n x a)		
	Totals				
To calculate the Hilsenhoff Biotic Index number (HBI), multiply the tolerance values by the number of specimens (n x a). Sum of the products (Σ) and then divide by the total numbert of speciments in all	$HBI = \frac{\sum n_i \times a_i}{N};$ $n = \text{number of specimens in transformed a = tolerance value of taxa}$ $N = \text{total number of specimen}$				

Post-assessment questions:

How does your HBI score compare to other groups?

Why is using a class average HBI score better than one group alone?

Which stream habitat(s) would be best to sample for bioassessment accurate indices?

How could your sampling method be more standardized?

Do you think your biotic index score will change if you sampled during a different season? How?

How do you think regional differences in streams and macroinvertebrates would affect the biotic assessment score?

axai i N = total number of specimens in sample

Family Biotic Index	Water Quality	Degree of Organic Pollution
0.00-3.75	Excellent	Organic pollution unlikely
3.76-4.25	Very Good	Possible slight organic pollution
4.26-5.00	Good	Some organic pollution probable
5.01-5.75	Fair	Fairly substantial pollution likely
5.76-6.50	Fairly Poor	Substantial pollution likely
0.51-7.25	Poor Voor Boor	Very substantial pollution likely
7.20-10.00	Very Poor	Severe organic pollution likely

HBI =

groups (N).

Aquatic Macroinvertebrate Order Tolerance & Traits						
Order	Common name	Tolerance Value	Functional Feeding Group			
Hemiptera	True bugs	5	predator			
Isopoda	Sow bugs	8	collector-gatherer			
Amphipoda	Scuds	8	collector-gatherer			
Decapoda	Crayfish	6	collector-gatherer			
Arachnida	Water mites	6	predator			
Mollusca	Clams or Mussels	8	collector-filterer			
Gastropoda	Snails	7	scraper			
Platyhelminthes	Flat worms	4	predator			
Hirudinea	Leeches	8	predator			
Oligochaeta	Aquatic worms	8	collector-gatherer			
Ephemeroptera	Mayflies	3	collector-gatherer			
Trichoptera	Caddisflies	3	scraper			
Plecoptera	Stoneflies	1	shredder			
Megaloptera	Dobsonflies/Alderflies	4	predator			
Coleoptera	Beetles	5	predator			
Odonata	Dragonflies/Damselflies	4	predator			
Diptera	True flies	5	collector-gatherer			