

Water Quality Index Instructions

Step 1

1. Refer to the 100 macroinvertebrates you sorted earlier in the activity, and the macroinvertebrate sorting worksheet.
2. Transfer the number of individuals tallied on the macroinvertebrate sorting worksheet to column “A” of the water quality index worksheet.

Step 2

1. Multiply the number of types of organisms (column A) found in each row with their individual sensitivity values. Record this new value in the column labeled “Total” (column C).

Step 3

1. Add the numbers in the column labeled # OF TYPES (column A). Record this number at the bottom of column A.
2. Add the numbers in the column labeled TOTAL (column C). Record this number at the bottom of column C.

Step 4

1. Divide the number at the bottom of the TOTAL column (column C) by the number at the bottom of the # OF TYPES column (column A). This number will be your water quality index number.

Step 5

1. Compare this number to the water quality index scale at the bottom of the Water Quality Index Worksheet.

Example: You have just collected 100 organisms from your sample site. After sorting 100 organisms you find that you have 2 types in the order Ephemeroptera (mayflies) and 3 types in the order Odonata (dragonflies and damselflies).

	(Column A)	(Column B)	(Column C)
MACROINERTEBRATE	# OF TYPES	TOLERANCE VALUE	TOTAL
Ephemeroptera (mayflies)	2	X 90	=180
Odonata (dragonflies and damselflies)	3	X60	=180
Sum of Columns	5	...	360

Water Quality Index
>79 = Excellent
60-79 = Good
40-59 = Fair
<40 = Poor

Divide column C by column A: $360 / 5 = 72$

Compare your water quality index (72) with the scale. Your results indicate the water is in “good” condition.