



# Module #11

## Calculating Water Quality Index

*Adapted and excerpted from Field Manual for Water Quality Monitoring: An Environmental Education Program for Schools by Mark M. Mitchell and William B. Stapp*

After completing the nine tests, the results are recorded and transferred to the WQI chart where a numerical value is obtained. For each test, the numerical value or Q-value is multiplied by a “weighting factor.” (See individual tests for more information on Q-value.) For example, dissolved oxygen has a relatively high weighting factor (.17) because it is more significant in determining water quality than the other tests. The nine resulting values are then added to arrive at an overall water quality index (WQI). The highest score a body of water can receive is 100.

- 90-100 Excellent
- 70-90 Good
- 50-70 Medium
- 25-50 Bad
- 0-25 Very Bad



*Any Water Quality Index less than 70 is unacceptable and should be shared with the appropriate water quality control agency for improvement.*

**Test Results:**  
**What was the Water Quality Index for your river/stream?**

**WQI CHART - Enter Your Data Here**

<i>Test Results for:</i>	<i>Raw Data Column A</i>	<i>Q-value Column B</i>	<i>x</i>	<i>Weighting Factor Column C</i>	<i>TOTAL = Column D</i>
1. Dissolved oxygen				0.17	
2. Fecal coliform				0.16	
3. pH				0.11	
4. Biochemical oxygen demand				0.11	
5. Temperature change				0.10	
6. Total phosphate				0.10	
7. Nitrates				0.10	
8. Turbidity				0.08	
9. Total solids				0.07	
<i>Overall Water Quality Index</i>					