



## Testing Water Quality

### *Analysis*

#### Materials Required

- Class Data and Mean Table
- Calculator
- Test Results
- Interpretation Cards
- Your observation table

#### RESULTS TABLE (good, poor or bad water quality)

TEST	RESULT	TEST	RESULT
Odour		Turbidity (Clarity)	
Temperature		pH	
Dissolved Oxygen		Free Chlorine	
Phosphates		Nitrates	

The result table above will be completed with the terms **good**, **poor** or **bad** to describe the results of each water quality test. Use the **Test Results Interpretation Cards** to answer the following questions and complete the result table.

1. Read the Odour Card and your observations. Decide and record the result for your water sample in the Results Table.
2. Read the Turbidity Card and your observations. Decide and record the result for your water sample in the Results Table.
3. Calculate and record the mean on the **Class Data and Mean Table** for all quantitative tests.

4. Circle any outliers on the Class Data and Mean Table. In science there is often a discussion about the scientific honesty of removing outliers from the mean calculation. Do you think the outliers should be included in the mean or not? Explain.

---

---

5. Use the mean results and the **Test Results Interpretation Cards** to determine the water quality for each quantitative test. Decide and record your results in the Results Table.

6. Now, using the results of all eight water tests, what do you think is the overall quality of the water you tested? Write three sentences to support your conclusion. Be sure to use the observations and results in your concluding sentences.

---

---

---

---

---

### Human Actions that Impact Water Quality

7. Name the water quality tests that can be influenced by fertilizer runoff from lawns, golf courses or farms.

---

---

8. What human activity can cause a change in pH?

---

---

9. Why is it good to have higher levels of free chlorine in tap water compared to lake and river water?

---

---

### **Reducing Water Pollution**

10. What human action has reduced phosphate levels?

---

---

11. What are two ways that planting trees near the shore of rivers and lakes improve water quality?

---

---

12. A law made in the 1980's required industries to install filters on their smokestacks. How did that law improve water quality?

---

---

13. What is one way this lab could be improved for next year?

---

---