

# LESSON PLAN

**John Chizek – Melbourne High, Melbourne, FL**

- Lesson Title:** Data Collection From Water Sampling
- Grade Level:** Secondary (Applied Math 2 -- Grades 10-12)
- Topic:** Using the water quality results to create a graph showing trends
- Time Required:** One school year (every week)
- Objectives:** The students will be able to:
1. Sample and test water for dissolved oxygen, pH, nitrate, nitrite, phosphate, and ammonia.
  2. Use data and represent it in a graphical form.
- Materials:** Water quality test kits (dissolved oxygen, pH, nitrate, nitrite, phosphate, and ammonia)  
Water sample site  
Graph paper  
Straight edge  
Calculator  
Colored pencils
- Procedure:**
1. Sample water according to prior instruction and perform water quality analyses with the test kits. Record your data.
  2. Analyze data.
  3. Share results with other groups.
  4. Graph results on a bulletin board size graph.
  5. Analyze the graphs and check for trends.
- Data:** Spreadsheets  
Graphs
- Questions:**
1. What were the trends if any?
  2. What could have explained any sudden "jumps"?
  3. Using the slope of the graph, are the analyzed parameters getting "better", "worse", or "staying the same"?