

Seminole County Water Atlas Learning Kit

Modeling Linear Data *Teacher's Guide*

Make tables and graphs in order to interpret data and speculate about future events.

Water Atlas Curriculum Lesson #

Grade Level: 8th

Subject Area/Course: Algebra I

Performance Objectives:

References are to the Next Generation Sunshine State Standards (2007).

Math

- MA.8.A.1.1 Create and interpret tables, graphs, and models to represent, analyze, and solve problems related to linear equations, including analysis of domain, range and the difference between discrete and continuous data.
- MA.8.A.1.2 Interpret the slope and the x- and y-intercepts when graphing a linear equation for a real-world problem.
- MA.8.A.1.3 Use tables, graphs, and models to represent, analyze, and solve real-world problems related to systems of linear equations.
- MA.8.A.1.5 Translate among verbal, tabular, graphical and algebraic representations of linear functions.

Academic Outcomes/Lesson Objectives:

- Students will analyze graphical data to determine tendencies.
- Students will use compare variables to determine relationships.
- Students will gather data and extrapolate information.
- Students will determine equations that describe given data.

Teacher Information:

Preview the student activity. Use Lake Jesup first, and then explore to find lakes in your area that has the data available to illustrate the graphing lesson. Some lakes have water levels controlled, so will not make appropriate graphs. You may want to have a selection of graphs for display/class discussion after students have made graphs.

Materials Needed:

Graph paper, internet access with www.Seminole.WaterAtlas.org bookmarked.

Safety: N/A

Vocabulary:

Slope – The steepness of a line on a graph as you move from left to right.

Intercept – The point where a line intersects an axis.

Line of best fit – A line drawn through a set of data points that best represents their trend.

Author: Ron Browning