

REPRESENTING DATA GRAPHICALLY / LESSON OVERVIEW

Objectives

The students will:

- understand that the way a set of data is displayed influences its interpretation;
- solve problems by collecting, organizing, displaying, and interpreting data;
- select the appropriate representation (line plot, bar graph, X-Y plots, or line graph) for presenting and displaying relationships among collected data and then justify the selection;
- make inferences and convincing arguments based on an analysis of collected data.

Lesson Summary

Part 1. Introduction and Tables (10 - 20 minutes)

Part 2. Graphs

- Line Plots (20 35 minutes)
- Bar Graphs (20 35 minutes)
- X-Y Plots (20 35 minutes)
- Line Graphs (20 35 minutes)

Part 3. Review (10 - 20 minutes)

Activity 1. Line Plots, Bar Graphs, and X-Y Plots (45 - 60 minutes or take-home)

Students will create their own table to organize data collected from the OCEARCH Global Shark Tracker. Each student will choose eight sharks and record name, gender, stage of life, length, and weight on their table. The students will then represent the data graphically, interpret the graph(s), and make inferences based on what they see.

Materials: Computer with internet access, paper, pencil, ruler, colored pencils, and worksheet (provided).

Activity 2. Line Graphs (45 - 60 minutes or take-home)

Students will create their own table to organize data collected from the OCEARCH Global Shark Tracker. Each student will choose one shark and record its name and the number of "pings" for the past ten days. The students will then represent the data graphically, interpret the graph, and make inferences based on what they see.

Materials: Computer with internet access, paper, pencil, ruler, and worksheet (provided).

