



Integration Opportunities

Science 5.1b Collaboratively plan and conduct investigations to produce data using appropriate tools to gather metric measurements and organize the gathered data.

Math 5.PS.1 a,b During a nature walk or outdoor scavenger hunt, have students count the number of times they find certain items (e.g., types of leaves, pinecones, rocks, or flowers). Record data and then use a line plot or stem-and-leaf plot to represent and analyze findings.

English 5.RI.3 b,c Collect data on an event or procedure from two or more informational texts. Include important similarities and differences and identify how an author's perspective impacts the reliability of information.

Physical Education 5.3 a-e Have students evaluate personal fitness data and compare it with criterion-referenced data. Then have students organize the data to create a personal fitness goal.

Summary of a Lesson

In groups, students will use computers to collect, organize and analyze data compiled in the classroom during a set period of time (topics will vary based on content). Data can be collected using surveys, logs, tracking sheets, or polls. The data will then be entered into a spreadsheet and organized to make it easier to understand (e.g. alphabetized, sorted, merged, categorized). Students will create, compare and contrast two visual representations of the data collected using tables, bar graphs, line graphs, etc. and determine how parts of the same data can be emphasized and interpreted differently using differing visuals. Groups will share their collection, organization, and analysis methods with the class. *Note: This lesson summary also aligns to 5.DA.2*

5.DA.1 Data and Analysis

The student will collect data or use data sets to solve a problem or investigate a topic. (a) Identify accurate ways data can be collected. (b) Evaluate the reliability of the data source. (c) Organize data based on similarities or patterns. (d) Compare and contrast various data elements.

Understanding the Standard

In fifth grade, students are expected to collect, view, and process or manipulate data using a computer to make predictions and draw conclusions. Data manipulation is organizing or modifying data to make it easier to interpret. Students will analyze data to determine which parts are needed to make a prediction, draw a conclusion, or should be emphasized to support an answer. Computers can be used to create tables or graphs that help students observe data in different ways and identify the type of data needed to address a problem or question. Once data has been collected and organized into a chart or graph, it can be analyzed to determine if a pattern exists. The pattern can be used to make predictions or answer questions. Determining what type of data is needed to answer a question and using a computer to access, organize, and analyze this data are skills needed in many career and academic fields.

Term	Definition
Data	Individual facts and information
Prediction	Making a guess of what will happen based on current facts
Reliability	The measure of how well a data source can be counted on to be consistent and free from errors
Analyze	Examine something closely to find patterns or connections.

Prerequisite Knowledge

To engage with this standard, students need to have experience collecting and sorting data in various ways and know how to use evidence to support their thinking.

