2.DA.1 Data and Analysis

> *The student will analyze data to make decisions with or without a computing device. (a) Collect and record numeric and non-numeric data and describe possible patterns. (b) Create questions that can and cannot be answered by the data. (c) Analyze data to draw conclusions and make decisions.*

Understanding the Standard

The collection and use of data about individuals and the world around them is a routine part of life and influences how people live. Data are pieces of information collected about people or things. These data can be recorded in tables and can be used to construct pictographs or bar graphs. Everyday digital devices can be used to collect and display data over time. Examples include cell phones, digital toys, and cars. These can contain tools (such as sensors) and computers to collect and display data from their surroundings. 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.

Term	Definition
Data	Individual facts and information
Prediction	Making a guess of what will happen based on current facts
Table	A way of organizing and displaying data using horizontal rows and vertical columns.
Graph	A way of organizing and displaying data using images to represent the relationship between two or more types of data.

Prerequisite Knowledge

Students should have a foundational knowledge of parts of a computer. They should have experience collecting and recording basic data and organizing the data into charts and graphs from first grade, but may need support with generating questions about the data and determining whether the data can be used to answer generated questions.

Integration Opportunities

Math 2.PS.1 Gather data on various items found outside (like types of leaves or shapes of rocks), then return to the classroom to organize and represent the data using tables and/or graphs. Have students identify patterns in the data and make decisions about their next exploration based on their findings.

Science 2.1a,c 2.4b Students will collect data on a plant's growth and construct a chart or graph to represent the data. Students will make plant growth predictions.

English 2.RL.1b,d Use a graphic organizer to collect and record elements of story structure and generate questions before and during reading from a collection of grade-level literary texts. Have students use the assembled information to generate predictions about characters and events of a new story.

Physical Education 2.4b In small groups. have students participate in a collaborative game recording their time on a chart. Students analyze their progress and strategy and make collaborative decisions to improve their time and complete the task.

Summary of a Lesson

Students will collect and organize weather data to make predictions about future weather patterns. Students will track the weather for a week and record it on a weather tracking chart using pictures or symbols. They will then organize their data into a bar graph (digitally or as a paper version) and make predictions about future weather patterns based on their data.

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