



Grade 5 Unit 2: Data, Abstraction and Modeling (Google Sheets with a Purpose)

Unit Focus

In this second unit of study, students will collect data on the game they created, learn how to input the data into a spreadsheet, and then graph the data in a meaningful way. Students will learn the basics of spreadsheets through the use of Google Sheets. In this performance task, students will apply these skills in displaying the game play data collected from their peers' rating of their game, before and after their modifications.

Stage 1: Desired Results - Key Understandings

Standard(s)	Transfer	
<p>Common Core <i>Mathematics: 3</i></p> <ul style="list-style-type: none"> Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets. <i>CCSS.MATH.CONTENT.3.MD.B.3</i> <p><i>Mathematics: 4</i></p> <ul style="list-style-type: none"> Make sense of problems and persevere in solving them. <i>CCSS.MATH.MP.1</i> <p>CSTA: Computer Science Standards (2017-) <i>CSTA: 3-5</i></p> <ul style="list-style-type: none"> Organize and present collected data visually to highlight relationships and support a claim. <i>1B-DA-06</i> Use data to highlight or propose cause-and-effect relationships, predict outcomes, or communicate an idea. <i>1B-DA-07</i> <p>Madison Public Schools Profile of a Graduate</p> <ul style="list-style-type: none"> Analyzing: Examining information/data/evidence from multiple sources to identify possible underlying assumptions, patterns, and relationships in order to make inferences. (POG.1.2) Product Creation: Effectively use a medium to communicate important information. (POG.3.2) 	<p><i>Students will be able to independently use their learning to...</i> T1 Explore and hone techniques, skills, methods, and processes to create and innovate</p>	
	Meaning	
	Understanding(s)	Essential Question(s)
	<p><i>Students will understand that...</i> U1 Spreadsheets are a tool used to communicate data in an organized format in a variety of personal and professional situations. U2 Data representation visually describes what is happening (modeling) to inform next iterations.</p>	<p><i>Students will keep considering...</i> Q1 What type of data do I want information on to optimize my game (maximize fun and functionality)? Q2 What's the right way to visualize the data? What do the results reveal? How do I use those results to improve the user experience?</p>
	Acquisition of Knowledge and Skill	
	Knowledge	Skill(s)
	<p><i>Students will know...</i> K1 Spreadsheets can be used to organize data K2 Data in a spreadsheet can be turned into graphs and charts for a visual understanding of data. K3 Pie chart is used to show parts of a whole. K4 Column chart is used to compare two or more sets of data.</p>	<p><i>Students will be skilled at...</i> S1 Create a spreadsheet. S2 Place data in a spreadsheet in a purposeful manner S3 Manipulate the data in a spreadsheet to create a graph or chart. S4 Select the most appropriate chart type to best represent your data.</p>