

<b>Grade 2 Mathematics</b>	<b>Unit 7 – Tables and Graphs</b>
<b>Big Idea/Rationale:</b>	<p>The goal for Unit 7 is to introduce the graphical representation of information. Graphing provides children with a powerful tool to make comparisons and to represent the numeric information extracted from a story problem. Children will read and create picture graphs to record and analyze data as the first step in learning about comparisons. As children collect data for use in a class project they will create data tables, picture graphs, and bar graphs to understand the data. Finally, they will be introduced to circle graphs. Through the use of these tools children will explore comparison situations.</p> <ul style="list-style-type: none"> <li>• Picture Graphs and Comparing</li> <li>• Tables, Data, and Picture Graphs</li> <li>• Bar Graphs, Circle Graphs, and Word Problems</li> </ul>
<b>Enduring Understandings:</b>	<p>Students will understand that:</p> <ul style="list-style-type: none"> <li>• Some questions can be answered by collecting and analyzing data, and the questions to be answered determines the data that needs to be collected and how best to collect it.</li> <li>• Graphs are an opportunity for children to develop critical thinking skills as they study relationships and draw conclusions about the data shown.</li> <li>• Graphs provide an opportunity to integrate math with other content areas which will help students learn to think mathematically in many contents.</li> </ul>
<b>Essential Questions:</b>	<ul style="list-style-type: none"> <li>• How can you use a bar graph and a Venn diagram to organize information and compare data?</li> <li>• How does showing data in a pictograph and a tally chart help you compare?</li> <li>• How can you use the data in a tally chart to make a bar graph?</li> <li>• How can ordered pairs be used to locate points on a grid?</li> <li>• How do you know if an event is more likely, equally likely, or less likely to happen?</li> <li>• How can you solve a problem by using a graph?</li> </ul>
<b>Lesson Objectives:</b>	<ul style="list-style-type: none"> <li>• Construct and interpret picture graphs.</li> <li>• Plan a data collection project.</li> <li>• Analyze information in picture graphs to create and solve problems.</li> <li>• Use the comparative terms same, more, and fewer to talk about information in picture graphs.</li> <li>• Collect data for a class project.</li> <li>• Solve comparison problems depicted in picture graphs.</li> <li>• Use the comparative terms same, more and fewer to talk about information in picture graphs.</li> <li>• Review the is greater than and is less than comparison symbols.</li> <li>• Create, represent, and solve comparison story problems.</li> <li>• Represent information in story problems in a simple picture graph.</li> </ul>

	<ul style="list-style-type: none"> <li>• Use comparative terms more, fewer, and same.</li> <li>• Construct tables for comparison situations.</li> <li>• Ask and answer comparison questions using information in a table.</li> <li>• Continue collecting data for a class project.</li> <li>• Construct tables and convert them to picture graphs.</li> <li>• Record data collected for a class project.</li> <li>• Convert data from a tally list to a summary table.</li> <li>• Convert a table to a picture graph and ask questions based on the data.</li> <li>• Distinguish bar graphs from picture graphs.</li> <li>• Convert picture graphs into bar graphs.</li> <li>• Read and analyze information in a bar graph.</li> <li>• Use a bar graph to ask and answer comparison questions.</li> <li>• Analyze information in bar graphs to answer questions.</li> <li>• Select a way to categorize and display raw data.</li> <li>• Create bar graphs to display data.</li> <li>• Analyze information to create bar graphs.</li> <li>• Compare bar graphs and circle graphs.</li> <li>• Convert bar graphs into circle graphs.</li> <li>• Read information from a circle graph.</li> <li>• Generate and solve problems based on a given circle graph.</li> <li>• Create questions and make comparison statements based on a given graph.</li> <li>• Convert horizontal graphs to vertical graphs.</li> <li>• Read and answer questions about information in tables, bar graphs, and circle graphs.</li> <li>• Find number partners in tables.</li> <li>• Write equation chains.</li> <li>• Make predictions from simple data.</li> <li>• Discuss conclusions and make predictions from graphs.</li> <li>• Infer trends from data.</li> </ul>
<p><b>Common Core State Standards:</b></p>	<p><b>2.OA.B.2:</b> Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.</p> <p><b>2.MD.D.10:</b> Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems using information presented in a bar graph.</p> <p><b>2.G.A.3:</b> Partition circles and rectangles into two, three, or four equal shares, describe the shares using the words halves, thirds, half of, a third of, etc., and describe the whole as two halves, three thirds, four fourths. Recognize that equal shares of identical wholes need not have the same shape.</p> <p><b>Mathematical Practices</b></p>
<p><b>Materials and Resources:</b></p>	<p>Grade 2 Math Expressions, Math Journals, manipulatives, IXL Mathematics</p>