Grade 2 Mathematics – Unit 9: Interpreting Data

Phoenixville Area School District

Stage 1 Desired Results

PA Core Standards:
CC.2.4.2.A.4 Represent and interpret data using line plots, picture graphs, and bar graphs

Transfer

TRANSFER GOALS

Students will be able to independently use their learning to…

- *Problem-Solving:* Persistently apply various problem-solving strategies and organized approaches to accurately understand and solve problems.
- *Fluency:* Demonstrate automatic recall of addition, subtraction, multiplication and division facts.
- *Mathematical Vocabulary:* Interpret mathematical vocabulary and apply proper terminology to engage in meaningful oral and written expression that communicates mathematical thinking, problem-solving methods, and rationale.

Meaning

UNDERSTANDINGS

Students will understand that…

- Organizing/interpreting data helps us make inferences and draw conclusions.
- Mathematics is used to make informed decisions about problems in everyday life.

ESSENTIAL QUESTIONS

Students will keep considering...

- How do we use data to make decisions?
- How is mathematics used to quantify and compare situations, events and phenomena?

Knowledge and Skills Acquisition

KNOWLEDGE

Students will know…

- Read, analyze, and interpret picture graphs
- Create picture graphs from a set of data
- Tally charts as a form of data collection

VOCABULARY

- Picture Graph
- Tally Chart
- Key
- Symbol

SKILLS

Students will be skilled at…

- Reading and understanding a key to determine what each symbol on a picture graph represents.
- Analyzing picture graphs to answer questions about a set of data orally and in writing.
- Creating a written tally chart to organize a data set.
- Creating a written picture graph to organize a data set.

Stage 2 – Evidence			
Code A/M/T	**Evaluative Criteria**	**Assessment Evidence**	
T	Valid conclusions are made based on given/ implied/ found information. All necessary work is shown with no missing information/ skipped steps. All representations are clear and labeled accurately.	PERFORMANCE TASK(S) *Students will demonstrate understanding (meaning-making and transfer) through complex performance by...* **Planning a Birthday Party** This task challenges students to collect a set of data, create a tally chart, and create a picture graph to organize a set of data. Students will also be answering questions about the set of data they collect. • *Goal:* Your task is to decide on the amounts of snacks needed for a birthday party. • *Role/Audience:* You are a party planner, and your audience is a group of 2nd graders at a birthday party. • *Situation/Product: You will create three different types of graphs to represent collected data.* 1. First, you will first create a tally chart to record the data collected. 2. Next, you will create a picture graph. You will need to determine the value of each symbol and create a key. You will create a picture graph to represent your data. 3. After that, you will create a bar graph showing the data you collected. Your bars can represent the data either vertically or horizontally. 4. Then, you will create a line plot to represent the data you collected. • *Analysis:* After creating the picture graph, bar graph, and line plot, you will answer several questions about the information on the graphs. Questions focus on analyzing the data (e.g. What snack will I need the most of? What snack will I need the least of? How many bags of [insert name of snack] will I need to purchase? How many more bags of [insert name of snack] will I need than [insert name of snack]?) Finally, you will create a grocery list with all snacks needed and the number of each snack needed. • *Success Criteria:* Your picture graph and bar graph must include a title, key, and symbols to represent the data. Your tally chart must include an accurate number of tallies for each snack choice. Your grocery must include a bulleted list of the snacks needed and the number of each item.	Differentiation Considerations: [Work on this section after completing Stages 1-2 of all units]
A	All necessary work is shown with no missing	OTHER EVIDENCE	Differentiation Considerations:

	information/ skipped steps. Valid conclusions are made based on given/ implied/ found information.		[Work on this section after completing Stages 1-2 of all units]