Grade 6 Math Unit 9 (Optional) Canterbury Public Schools

Subject	Math
Grade Level	6
Unit Title	Putting it All Together (optional)
Unit Goals	Making Connections Voting
Pacing (# of weeks)	2 - 3 weeks
Standards	6.RP.A.3 – Use ratio and rate reasoning to solve real-world and mathematical problems.
	6.NS.C.5-8 – Apply concepts of positive and negative numbers and absolute value.
	6.EE.B.6-7 – Use variables and expressions to solve problems.
	6.SP.A & B – Recognize statistical questions, summarize data, and display distributions.
	MP.1–MP.8 – Engage with the full range of Standards for Mathematical Practice.
Content/Conceptual Knowledge (know)	Ratio and rate Voting and polls Positive and negative numbers Equivalent fractions Use variables and expressions to solve problems Concepts of positive and negative numbers
Skills (be able to do)	Solve Fermi Problems Estimate quantities in a real-world situation and explain the estimation Coordinate diagrams and expressions involving equivalent fractions Interpret and create diagrams involving a rectangle decomposed into squares is a geometric way to determine the greatest common factor of two numbers Find equivalent fractions

Essential Questions	What makes a question a statistical question?
	• How can we describe a data set using center and variability?
	• Why is it important to consider variability when analyzing data?
	 How do different data displays help us understand the story the data tells?
	• When would it be better to use the median and IQR rather than the mean and range ?
Enduring Understandings	Math connects to real-world issues and can be used to analyze data and make informed decisions.
	Representing and interpreting data helps us understand fairness, trends, and opinions—especially in contexts like voting.
	Using ratios, expressions, and statistics allows us to solve real-world problems and justify our conclusions.
Vocabulary	Mixed number, in favor, majority, plurality, runoff, in all , fair,
Common Learning Experiences	Fermi Problems,
	Common Learning Experiences (aligned with IM lessons):
	1. Lesson: What is a Statistical Question?
	 Explore and sort questions into statistical vs. non-statistical.
	 Discuss variability in responses.
	2. Lesson: Creating and Interpreting Dot Plots
	 Students collect class data (e.g., shoe sizes, number of pets) and create a dot plot.
	 Identify clusters, gaps, and outliers.
	3. Lesson: Describing Data Distributions
	• Analyze shapes of data sets and discuss skew, symmetry, and

	spread.
	4. Lesson: Introduction to Histograms
	 Compare dot plots and histograms using real-world examples like student heights.
	5. Lesson: Measures of Center – Mean vs. Median
	 Use numeric and visual representations to find and compare mean and median.
	 Discuss when each is most useful.
	6. Lesson: Measures of Spread – Range and IQR
	 Create box plots and interpret IQR as a measure of variability.
	 Compare multiple box plots.
	7. Culminating Project or Task:
	 Investigate a statistical question (e.g., "How much do students in our class sleep on school nights?")
	 Collect data, create visual displays, and summarize using center and spread.
	 Present findings and reasoning to the class.
Assessments	Analyze a real-world data set and create a dot plot or histogram to represent it.
	Given a data set, calculate and interpret the mean, median, range, and IQR.
	Compare two data sets using measures of center and variability to determine which is more consistent or has higher values.
	Reflective writing: Explain which measure of center and spread is more appropriate and why.
	End-of-unit assessment from the IM curriculum, including constructed response and multiple-choice items.

Resources	Colored pencils, four-function calculators, graph paper, internet, scissors
Strategies	Group presentations, turn and talk, games and situations for problem solving