Trimester	Unit Title	Recommended Instructional Days					
3	Represent Data	5 - 9 Days					
	Domain						
Strand:							
1.MD.C.4 Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another. Major Cluster Supporting Cluster Additional Cluster							
	Progress Indicator: ♦ Tests ♦ Homework / Classwork ♦ Projects ♦ Formative assessments						
	Mathematical Practices:						
 Make sense of problems and persevere in solving them. Reason abstractly and quantitatively. Construct viable arguments and critique the reason of others. Model with mathematics. Use appropriate tools strategically. Attend to precision. Look for and make use of structure. Look for and express regularity in repeated reasoning. 							
Recommended Activities, Investigations, Interdisciplinary Connections, and/or Student Experiences to Explore NJSLS-CLKS within Unit							
Essential Questions: Lesson 10.1: What do pictures in a picture graph show? Lesson 10.2: How do you make a picture graph to answer a question?							

Lesson 10.3: How can you read a bar graph to find the number that a bar shows?

Lesson 10.4: How does a bar graph help you compare information?

Lesson 10.5: How do you count the tallies on a tally chart?

Lesson 10.6: Why is a tally chart a good way to show information that you have collected? Lesson 10.7: How can showing information in a graph help you solve problems?

Essential Understandings:

Lesson 10.1: Analyze and compare data shown in a picture graph where each symbol represents one Lesson 10.2: Make a picture graph where each symbol represents one and interpret the information Lesson 10.3: Analyze and compare data shown in a bar graph

Lesson 10.4: Make a bar graph and interpret the information

Lesson 10.5: Analyze and compare data shown in a tally chart

Lesson 10.6: Make a tally chart and interpret the information

Lesson 10.7: Solve problem situations using the strategy make a graph

Vocabulary

- Picture graph
- Bar graph
- Tally chart
- Tally mark

Suggested Activity Description:

Personal Math Trainer, Tutorial Videos, Vocabulary Game, Reading Grab and Go Activity, Explore and Guided/Independent Practice related to the NJSLS, Evaluation Online Activity, Essential Question Discussion and Check –In, Basic Skills Review, Manipulative Activity, Reteach Activity, Reading Strategies Activity, Success for English Learners Activity, Performance Task

Interdisciplinary Connections:

STEM Activity: In Chapter 10, children develop their understanding of representing data, by creating a data table from given information or by answering questions based on information given in graphs. These same topics are used often in the development of various science concepts and process skills. Help children make the connection between math, science, and engineering through the S.T.E.M. activities and activity worksheets found at www. thinkcentral.com.

In Chapter 10, children connect math, science, and engineering with the S.T.E.M. Activity Set Things in Motion and the accompanying worksheets (pages 109 and 110). Through this S.T.E.M. Activity, children will connect the GO Math! Chapter 10 concepts and skills with various identifying data skills, including finding the largest data value from a table of values. It is recommended that this S.T.E.M. Activity be used after Lesson 10.3.

Science:

- 1. During one week, record the weather for each day. Make sure to record the predominant weather. For example, it might be cloudy for one hour and sunny the rest of the day, and you would record this day as sunny. At the end of the week, make a picture graph to show the week's weather. To extend the activity, continue recording the weather for several weeks and then compare the graphs to see how the weather changes from week to week.
- 2. Have children look at a picture showing a forest scene. Ask them to make a tally chart showing how many things in the picture are living and how many things are not living. Have children make a two-row tally chart Have children repeat the activity, but this time they identify and tally things in the classroom that are living and not living.

Social Studies:

- 1. Ask children to name as many different occupations as they can, and make a list on the board. The list may include jobs that their parents have. As you say each job aloud, have children raise their hand to show if they have heard of it. You might ask a volunteer to explain what a person does who has that job. Make a class picture graph showing what each child wants to do as an occupation when he or she grows up. Then ask questions about the graph for children to answer.
- 2. On the board, draw a blank tally chart with three rows. Label the rows with different numbers of people in a family. Have each child come to the board and make a tally mark in the row for the number of people in the family or group they live with. How many people are in a family for most children in the class? Answers will vary.

Language Arts:

- 1. Vocabulary Builder pg. 573 **Visualize It** Have children look at each review word and check off if they know the word, if it sounds familiar, or if they do not know the word. If some children checked off that they know a word, ask them to tell what they think the word means. Then discuss the meaning of each word. **Understand Vocabulary** You may want to share the following concepts with children.
 - More and fewer are used to compare two groups of objects.
 - Most and fewest are used to compare three or more groups of objects.
- 2. Miss B's Class Makes Tables and Graphs (From the Grab and Go Differentiated Center Kit)

Spot Light On: Use random response strategies

Social and Emotional Learning: Competencies	Social and Emotional Learning: Sub-Competencies			
SEL Competencies: • Self- awareness • Social Awareness	Recognizing the importance of self-confidence in handling daily tasks and challenges.			

Self- Management Relationship Skills Responsible Decision-Making	 Demonstrate an awareness of the expectations for social interactions in a variety of ways. Demonstrate an understanding of the need for mutual respect when viewpoints differ. Identify and apply ways to persevere through alternative methods to achieve goals. Utilize positive communication and social skills to interact effectively with others. Develop, implement, and model effective problem solving and critical thinking skills. 				
Assessments (Formative) To show evidence of meeting the standard/s, students will successfully engage within:	Assessments (Summative) To show evidence of meeting the standard/s, students will successfully complete:				
Formative Assessments: • Teacher Observations • Exit Tickets • Quizzes • Self Assessments • Math Journals • Homework/Classwork • Teacher created assessments	Benchmarks & Summative Assessments: Chapter/Unit Assessments • Standardized Tests • District Assessments • Project-based Assessments				
Differentiated Student Access to Content: Teaching and Learning <u>Resources/Materials</u>					

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Core Alternate Resources Core Resources IEP/504/At-Risk/ESL		ELL Core Resources	Gifted & Talented Core Resources				
Go Math Workbook, IXL,ST MATH 60 minutes a week, Personal Math Trainer, Math on the Spot Videos, My HRW, Khan Academy, Illustrative Mathematics, Learn360, TeacherTube, BrainPOP, Freckle, LearnZillion, MobyMax, ST Math, Edulastic, Achieve the Core, Desmos	Reteaching worksheets, Skill building workbook, Math manipulatives, Leveled practice worksheets	Dictionary for native language, Video tutorial in native language, Success for English Learners worksheets, Leveled Strategies for English Learners, Linguistic Support	ST Math special projects, G& T tasks, Enrichment worksheets, Art of Problem Solving, Leveled assessments				

Supplemental Resources

Technology:

• Chromebooks • Online math manipulatives

Other:

• Google Classroom, Google Meets, Schoology, Interactive Workbooks • Illustrative Mathematics • insidemathematics.org • National Library of Virtual Manipulatives

Differentiated Student Access to Content: Recommended <u>Strategies & Techniques</u>

Core Resources	Alternate Core Resources IEP/504/At-Risk/ESL	ELL Core Resources	Gifted & Talented Core		
Deliver instruction utilizing varied learning styles including audio, visual, and tactile/kinesthetic, provide individual instruction as needed, modify assessments and/or rubrics, repeat	Utilize a multi-sensory (VAKT) approach during instruction, provide alternate presentations of skills by varying the method (repetition, simple explanations, additional examples, modeling, etc.), modify test content and/or format, allow students to retake test for additional credit, provide additional times and preferential seating as needed, review, restate and repeat directions, provide study guides, and/or break assignments into segments of shorter tasks.	Extend time requirements, preferred seating, positive reinforcement, check often for understanding/review, oral/visual directions/prompts when necessary, supplemental materials including use of an online bilingual dictionary, and modified assessment and/or rubric.	Create an enhanced set of introductory activities, integrate active teaching/learning opportunities, incorporate authentic components, propose interest-based extension activities, and connect student to related		

	Disciplinary Concept(s): Technology Literacy					
NJSLS CAREER	Core Ideas:	Digital tools have a purpose.				
READINESS, LIFE LITERACIES & KEY SKILLS	Performance Expectation/s:	9.4.2.TL.6 Illustrate and communicate ideas and stories using multiple digital tools				

	Career Readiness, Life Literacies, & Key Skills Practices					
	Act as a responsible and contributing community member and employee. Attend to financial well-being. Consider the environmental, social and economic impacts of decisions.					
	Demonstrate creativity and innovation. Utilize critical thinking to make sense of problems and persevere in solving them. Model integrity, ethical leadership and effective management. Plan education and career paths aligned to personal goals. Use technology to enhance productivity, increase collaboration and communicate effectively.					
	Work productively in teams while using cultural/global competence.					

New Jersey Legislative Statutes and Administrative Code (place an "X" before each law/statute if/when present within the curriculum map)								
Amistad Law: <i>N.J.S.A. 18A 52:16A-88</i>		Holocaust Law: <i>N.J.S.A. 18A:35-28</i>		LGBT and Disabilities Law: N.J.S.A. 18A:35-4.35	X	Diversity & Inclusion: N.J.S.A. 18A:35-4.36a		Standards in Action: Climate Change