Trimester	Unit Title	Recommended Instructional Days
3	**Time, Length, Liquid Volume and Mass**	**16 - 20 days**

Domain

Strand:

3.MD.A.1 Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.

3.MD.B.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.

3.MD.A.2 Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l).6 Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.

Key:

Major Cluster **Supporting Cluster** **Additional Cluster**

Progress Indicator: ◊ Tests ◊ Homework / Classwork ◊ Projects ◊ Formative assessments ◊Summative assessments

Mathematical Practices:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reason of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.

7. Look for and make use of structure.
8. 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 How can you tell time to the nearest minute?
Lesson 10.2 How can you tell when to use A.M. and P.M. with time?
Lesson 10.3 How can you measure elapsed time in minutes?
Lesson 10.4 How can you find a starting time or an ending time when you know the elapsed time?
Lesson 10.5 How can you use the strategy, draw a diagram, to solve problems about time?
Lesson 10.6 How can you generate measurement data and show the data on a line plot?
Lesson 10.7 How can you estimate and measure liquid volume in metric units?
Lesson 10.8 How can you estimate and measure mass in metric units?
Lesson 10.9 How can you use models to solve liquid volume and mass problems?

Essential Understandings:

Lesson 10.1 How can you tell time to the nearest minute?
Lesson 10.2 How can you tell when to use A.M. and P.M. with time?
Lesson 10.3 How can you measure elapsed time in minutes?
Lesson 10.4 How can you find a starting time or an ending time when you know the elapsed time?
Lesson 10.5 How can you use the strategy, *draw a diagram*, to solve problems about time?
Lesson 10.6 How can you generate measurement data and show the data on a line plot?
Lesson 10.7 How can you estimate and measure liquid volume in metric units?
Lesson 10.8 How can you estimate and measure mass in metric units?
Lesson 10.9 How can you use models to solve liquid volume and mass problems?

Vocabulary:

- Minute
- A.M.
- Midnight

- Noon
- P.M.
- Elapsed time
- Liquid volume
- Liter (L)
- Gram (g)
- Kilogram (kg)
- Mass

Suggested Activity Description(s):
Show what you know, Problem of the Day, Fluency Builders, Personal Math Trainer, Math on the Spot Videos, Real World Videos, Vocabulary Preview Activity, Reteach and Enrichment Activities, Interactive Student Edition Textbook, RtI Activities, Grab and Go Differentiated Centers, Journal Writing, Advanced Learners Activities, Assessments, Standards Focus Packets for the related NJSLS, Success for English Learners Activities, Performance Task

◊Suggested Sample Tasks:
Activity Description: Weather and Patterns
Interdisciplinary Connections: Math and Science
Content: Hands On Activity: Battle of the Beans
(Unit 7 Lesson 2; Pages 432-435)
*Modification: Have each group research the average temperature in degrees Fahrenheit for their city during the last 12 months.

Science
Objective: Research and analyze weather data for a particular location.
Skills Assessed:
● Conducting Research
● Temperature
● Making Claims and Predictions
● Weather Patterns
● Compare and Contrast

Math
Objective: Create a scaled bar graph.
Skills Assessed:
● Graphing
● Interpreting and Analyzing Data

Interdisciplinary Connections:

STEM Activity: In Chapter 10 students extend their understanding of time, length, liquid volume, and mass by choosing appropriate units and tools to measure different quantities. These same topics are used often in the development of various science concepts and process skills. Help students make the connection between math and science through the S.T.E.M. activities and activity worksheets found at Think Central.

In Chapter 10, students connect math and science with the S.T.E.M. Activity Measure It! and the accompanying worksheets ((pgs. 115-116) In correlation with ScienceFusion pgs. 20-21)). Through this S.T.E.M. Activity, students will connect to the GO Math! Chapter 10 concepts and skills with various units of measure, including choosing the appropriate tool to measure a given quantity. It is recommended that this S.T.E.M. Activity will be used after Lesson 10.8.

Science:
1. Two groups measured the outside temperature each day for a week using the same tools. One group measured daily at 10:05 a.m. and the other group measured at 10:59 a.m. The average temperature for the first group was 55°F, and the second group was 57°F.

One way to explain the difference is that the second group measured the temperature later in the morning when it usually gets warmer. How much time elapsed between the times the two groups measured the temperature?

2. Connect to Science, Go Math pg. 582

Social Studies:
1. Water trails are recreational waterways on a lake, river, or ocean. The Middle Allegheny River Water Trail in northwestern Pennsylvania is 107 miles long. Three sections of this river trail are part of the National Wild Scenic Rivers System. This list was made to raise awareness about the fragile nature of America's river resources. Max and his family went canoeing on the Allegheny River. They got into their canoe at 9:02 a.m. and got out to take a break at 9:49 a.m. For how long were Max and his family in the canoe?

Language Arts:
1. Late for School - (From the Differentiated Centers Kit Grab and Go)
2. A Walk on the Path - (From the Differentiated Centers Kit Grab and Go)

3. A Trip to the Pond - (From the Differentiated Centers Kit Grab and Go)
4. How Heavy? How Much? - (From the Differentiated Centers Kit Grab and Go)

Spot Light On: *Seek multiple perspectives and different answers to questions.*

Social and Emotional Learning: ***Competencies***	**Social and Emotional Learning:** ***Sub-Competencies***
SEL Competencies: • Self- awareness • Social Awareness • Self- Management • Relationship Skills • Responsible Decision-Making	• Recognizing the importance of self-confidence in handling daily tasks and challenges. • 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 *Resources/Materials*

Core Resources	**Alternate Core Resources** ***IEP/504/At-Risk/ESL***	**ELL Core Resources**	**Gifted & Talented Core Resources**
Go Math Workbook, IXL, Personal Math Trainer, Math on the Spot Videos, My HRW, Khan Academy,	Reteaching worksheets, Skill building workbook, Math manipulatives, Leveled practice	Dictionary for native language, Video tutorial in native language, Success for English Learners worksheets, Go	ST Math Challenge Objectives, G&T tasks, Enrichment worksheets, Art of Problem

Illustrative Mathematics, Learn360, TeacherTube, BrainPOP, Freckle, LearnZillion, MobyMax, 60 minutes of weekly ST Math, Edulastic, Achieve the Core, Desmos	worksheets	Math Leveled Strategies for English Learners, Go Math Linguistic Support	Solving, Leveled assessments, Go Math Teaching for Depth

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 *Strategies & Techniques*

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.	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 students to related content.

NJSLS CAREER READINESS, LIFE LITERACIES & KEY SKILLS	**Disciplinary Concept(s):** Work Productively in Teams	
	Core Ideas:	Curiosity and willingness to try new ideas (intellectual risk taking) contributes to the development of creativity and innovation.
	Performance Expectation/s:	**9.4.5.CI.3**: Participate in a brainstorming session with individuals with diverse perspectives to expand one's thinking about a topic of curiosity.
	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: *N.J.S.A. 18A 52:16A-88*		Holocaust Law: *N.J.S.A. 18A:35-28*		LGBT and Disabilities Law: *N.J.S.A. 18A:35-4.35*	**x**	Diversity & Inclusion: *N.J.S.A. 18A:35-4.36a*	**x**	Standards in Action: *Climate Change*