Grade 3 Unit 1 Math Tools, Time and Multiplication

Content Area: **Math**
Course(s):
Time Period: **Marking Period 1**
Length: **4 weeks**
Status: **Published**

Course Pacing Guide

Unit 1 - Math Tools, Time, and Multiplication

4 Cycles

13 Lessons

1.1 Number Grids (2 Days)

1.2 Introduce the Student Reference Book (1 Day)

1.3 - Tols for Mathematics (1 Day)

1.4 - Number Lines and Rounding (2 Days)

1.5 - Time (2 Days)

1.6 - Open Response - How Long is a Morning? (2 Days)

1.7 - Scaled Bar Graphs - (1 Day)

1.8 - Multiplication Strategies (1 Day)

1.9 - Introducing Division (1 Day)

1.10 - Foundational Multiplication Facts (2 Days)

1.11 - The Length of a Day Project (1 Day) -

1.12 - Explorations - Exploring Mass, Equal Shares, and Equal Groups (1 Day)

1.13 - Measuring Mass - 1 Day

1.14 - Unit 1 Progress Check - 2 Days

Unit Overview

In this unit, students will be able to:

- be a part of an active and collaborative classroom
- use a variety of math tools (number grids, clocks, equal groups, etc) to solve problems
- tell time to the nearest minute.
- use models to calculate elapsed time.
- begin to be exposed to multiplication and division strategies.

Enduring Understandings

By the End of Unit 1, expect children to:

- interpret multiplication in terms of equal groups for multiples of 5 and 10.
- solve word prolbmes in situations involving equal groups and arrays by using drawings to represent the problem.
- multiply using strategies for all products of one-digit numbers 2 and 10
- use place value to round whole numbers to the nearest 10 for 2-digit numbers or 100 for 3-digit numbers using an open number line.
- add and subtract within 1000 using a number grid and strategies based on place value.
- tell and write time to the nearest 5 minutes and use a number line to add time intervals in minutes.

Essential Questions

What math tools can you use to solve subtraction, time and multiplication problems?

What strategies can you use to calculate elapsed time?

What strategies can you use to solve multiplication and division problems?

1.1 - How can you use a number grid help to find the difference of two numbers?

1.2 - How does a number grid help to find the difference of two numbers?

1.3 - Which tools can you use to tell time and measure length?

1.4 - What strategies can you use to round to the nearest 10 and 100?

1.5 - What tools can you use to tell time accurately to the nearest 5 minutes?

1.6 - How can you accurately calculate elapsed time?

1.7 - How can you use a tally chart to show data?

1.8 - How can you use equal groups to solve number stories? What number models match with equal groups?

1.9 - What drawings can you create to represent and solve division number stories?

1.10 - How can you use skip counting or repeated addition to solve multiplication problems?

SKIP LESSON 1.11

1.13 - How can you make an accurate estimate and measure mass?

New Jersey Student Learning Standards (No CCS)

MA.3.OA.A.1	Interpret products of whole numbers, e.g., interpret 5 × 7 as the total number of objects in 5 groups of 7 objects each.
MA.3.OA.A.3	Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.
MA.3.OA.C.7	Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that 8 × 5 = 40, one knows 40 ÷ 5 = 8) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.
MA.3.NBT.A.1	Use place value understanding to round whole numbers to the nearest 10 or 100.
MA.3.NBT.A.2	Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.
MA.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.

Amistad Integration

Amistad Integration Document

The Girl With a Mind for Math: The Story of Raye Montague by Julia Finley Mosca

Holocaust/Genocide Education

- Teach district mandated diversity lessons
- Incorporate Responsive Classroom Program into classroom community

Interdisciplinary Connections

LA.RL.3.1	Ask and answer questions, and make relevant connections to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

Technology Standards

Technology Integration:

SeeSaw

TechExit Tickets

TECH.8.1.5.A.1	Select and use the appropriate digital tools and resources to accomplish a variety of tasks including solving problems.
TECH.8.1.5.C.CS1	Interact, collaborate, and publish with peers, experts, or others by employing a variety of digital environments and media

21st Century Themes/Careers

CAEP.9.2.4.A.4	Explain why knowledge and skills acquired in the elementary grades lay the foundation for future academic and career success.

Financial Literacy Integration

9.1.4.B.1 Differentiate between financial wants and needs.

9.1.4.B.2 Identify age-appropriate financial goals.

9.1.4.B.3 Explain what a budget is and why it is important.

9.1.4.B.4 Identify common household expense categories and sources of income.

9.1.4.B.5 Identify ways to earn and save.

9.1.4.C.1 Explain why people borrow money and the relationship between credit and debt.

9.1.4.C.2 Identify common sources of credit (e.g., banks, credit card companies) and types of credit (e.g., loans, credit cards, mortgages).

9.1.4.C.3 Compare and contrast credit cards and debit cards and the advantages and disadvantages of using each.

9.1.4.C.4 Determine the relationships among income, expenses, and interest.

9.1.4.C.5 Determine personal responsibility related to borrowing and lending.

9.1.4.C.6 Summarize ways to avoid credit problems.

9.1.4.D.1 Determine various ways to save.

9.1.4.D.2 Explain what it means to “invest.”

9.1.4.D.3 Distinguish between saving and investing.

9.1.4.E.1 Determine factors that influence consumer decisions related to money.

9.1.4.E.2 Apply comparison shopping skills to purchasing decisions.

9.1.4.F.1 Demonstrate an understanding of individual financial obligations and community financial

obligations.

9.1.4.F.2 Explain the roles of philanthropy, volunteer service, and charitable contributions, and analyze their impact on community development and quality of living.

9.1.4.G.1 Describe how valuable items might be damaged or lost and ways to protect them.

Financial Literacy Integration - Grade 3

Instructional Strategies & Learning Activities

Instructional Strategies

- Number Grids
- Elapsed Time Number Line
- incorporate math vocabulary
- Quick Look Cards
- Explaining Thinking Sentence Stems - "I knew I needed to... , I used the strategy of ... , First, I .... , Second, I .... , Which is how I got my answer ..."

Learning Activities/Hands on Activities

1. Vacation Time Activity:

You will plan three vacations. You will need to find flights from your city to three different destinations and back (round trip). For each of your trips you need to determine the total amount of hours and minutes it would take from the time you take off from your first flight near the city where you live to the time you land at your destination's final stop. You will do the same for each return trip. Prepare 3 trip summary sheets with all information including starting city, departure time, all stops the flight may make, destination city, arrival time and total travel time. (Many people use online sources such as priceline.com to plan their trips and vacations).

Differentiated Instruction

- See Teacher's Manual p. 15, 21, 27, 33, 41, 65, 73, 79, 87, 93, and 99 for Readiness Activities,

Enrichment and Extra Practice

- Use data from Tech-Exit Tickets, Exit Slips, and Progress Monitoring to group students for each skill
- Student "may-do" activities
- sentence and discussion stems
- visual anchor charts for previous, current, and next lessons

Formative Assessments

Here are exit tickets for most lessons in Unit 1. Just click “Make a copy” and then you will have access to edit and see responses for each google form. YOU WILL NEED TO COPY AND PASTE THE LINK RATHER THAN CLICKING.

Unit 1:

1-1 https://docs.google.com/forms/d/1idH7CuUnHynz98u3dgDRmA7GJPt6avF3ufvQH-V0mRk/copy?usp=sharing

1-4 https://docs.google.com/forms/d/1NhYntMi_OLRvvC6aTE-GSwr4jBvW4a35JHzq6U74eDY/copy?usp=sharing

1-5 https://docs.google.com/forms/d/1_z_MKTHVqdigpVmm_AwkS5ohy-HeswHn7dYJ7Ulqf9k/copy?usp=sharing

1-6 https://docs.google.com/forms/d/1SfFlhyPYCzX4zNa8jKKaLYKCBMY4dJmW84smzY9yUSs/copy?usp=sharing

1-8 https://docs.google.com/forms/d/1BuZYH_2PhVZNPgghEQBdMWxW8fipHw_SsSwGTF77v3Q/copy?usp=sharing

1-9 https://docs.google.com/forms/d/1pNo_D3nyJNejnbHCtF8aJza2LyL6JBXUfDM0TWTd2w0/copy?usp=sharing

Summative Assessment

Unit 1 Progress Check - Focuses on the standards of Operations and Algebraic Thinking, Number and Operations in Base Ten, and Measurement and Data. There is also an Open Response to assess ability to interpret a graph and solve a problem.

Benchmark Assessments

Beginning of the Year Assessment - benchmark test for assessing initial third grade skills.

Alternate Assessments

Progress Monitoring By Standard on Link-It

Resources & Technology

Haddonfield 3rd Grade Drive: https://drive.google.com/drive/folders/0AEjSmfrJUlLZUk9PVA

IXL Related Skills:

Third Grade T1-14 (Time Related)

Third Grade F3, F6 and F11 (Multiplication 5 and 10)

Third Grade E1-8 (Understanding Multiplication - Equal Groups)

Third Grade P1 and P2 (Rounding)

BOE Approved Texts

McGraw Hill Education - Everyday Math Manual - Volumes 1 and 2

Closure

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1-1 https://docs.google.com/forms/d/1idH7CuUnHynz98u3dgDRmA7GJPt6avF3ufvQH-V0mRk/copy?usp=sharing

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1-5 https://docs.google.com/forms/d/1_z_MKTHVqdigpVmm_AwkS5ohy-HeswHn7dYJ7Ulqf9k/copy?usp=sharing

1-6 https://docs.google.com/forms/d/1SfFlhyPYCzX4zNa8jKKaLYKCBMY4dJmW84smzY9yUSs/copy?usp=sharing

1-8 https://docs.google.com/forms/d/1BuZYH_2PhVZNPgghEQBdMWxW8fipHw_SsSwGTF77v3Q/copy?usp=sharing

1-9 https://docs.google.com/forms/d/1pNo_D3nyJNejnbHCtF8aJza2LyL6JBXUfDM0TWTd2w0/copy?usp=sharing

Additional Closure Options:

- Snowstorm - Students write down what they learned on a piece of scratch paper and wad it up. Given a signal, they throw their paper snowballs in the air. Then each learner picks up a nearby response and reads it aloud.
- Gallery Walk - On chart paper, small groups of students write and draw what they learned. After the completed works are attached to the classroom walls, others students affix post-its to the posters to extend on the ideas, add questions.
- Low-Stakes Quizzes - Give a short quiz using technologies like Kahoot or a Google form.

- Have students write down three quiz questions (to ask at the beginning of the next class).

ELL

- Alternate Responses
- Advance Notes
- Extended Time
- Teacher Modeling
- Simplified Written and Verbal Instructions
- Frequent Breaks
- E-Dictionaires
- Google Translate

Special Education

- Shorten assignments to focus on mastery of key concepts.
- Evaluate the classroom structure against the student's needs (flexible structure, firm limits, etc.).
- Keep workspaces clear of unrelated materials.
- Keep the classroom quiet during intense learning times.
- Provide a computer for written work.
- Seat the student close to the teacher or a positive role model.
- Provide an unobstructed view of the chalkboard, teacher, movie screen, etc.
- Give directions in small steps and in as few words as possible.
- Number and sequence the steps in a task.
- Have student repeat the directions for a task.
- Provide visual aids.
- Go over directions orally.
- Provide a vocabulary list with definitions.
- Permit as much time as needed to finish tests.
- Allow tests to be taken in a room with few distractions (e.g., the library).
- Have test materials read to the student, and allow oral responses.
- Divide tests into small sections of similar questions or problems.
- Allow the student to complete an independent project as an alternative test.
- Show a model of the end product of directions (e.g., a completed math problem or finished quiz).
- Stand near the student when giving directions or presenting a lesson.
- Mark the correct answers rather than the incorrect ones.
- Permit a student to rework missed problems for a better grade.

504

- preferential seating
- extended time on tests and assignments
- reduced homework or classwork
- verbal, visual, or technology aids
- modified textbooks or audio-video materials
- behavior management support
- adjusted class schedules or grading
- verbal testing
- excused lateness, absence, or missed classwork
- pre-approved nurse's office visits and accompaniment to visits
- occupational or physical therapy

At Risk

- Use of mnemonics
- Have student restate information
- Provision of notes or outlines
- Concrete examples
- Assistance in maintaining uncluttered space
- Weekly home-school communication tools (notebook, daily log, phone calls or email messages)
- Lab and math sheets with highlighted instructions
- Graph paper to assist in organizing or lining up math problems
- Use of manipulatives
- No penalty for spelling errors or sloppy handwriting
- Follow a routine/schedule
- Teach time management skills
- Verbal and visual cues regarding directions and staying on task
- Adjusted assignment timelines
- Visual daily schedule
- Immediate feedback
- Work-in-progress check
- Pace long-term projects
- Preview test procedures
- Film or video supplements in place of reading text
- Pass/no pass option
- Cue/model expected behavior
- Use de-escalating strategies
- Use peer supports and mentoring
- Have parent sign homework/behavior chart
- Chart progress and maintain data

Gifted and Talented

- Offer the Most Difficult First
- Pretest for Volunteers
- Offer choice
- Speak to Student Interests
- Allow G/T students to work together
- Tiered learning
- Focus on effort and practice
- Encourage risk taking