

Unit 1 Place Value, Addition and Multiplication

Content Area: **Mathematics**
Course(s):
Time Period: **Generic Time Period**
Length: **6 weeks**
Status: **Published**

Standards

TECH.8.1.5.A.CS1	Understand and use technology systems
LA.3.SL.3.1.B	Follow agreed-upon norms for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
MA.3.3.OA.D	Solve problems involving the four operations, and identify and explain patterns in arithmetic.
LA.3.SL.3.1.C	Ask questions to check understanding of information presented, stay on topic, and link their comments to the remarks of others.
LA.3.SL.3.1.D	Explain their own ideas and understanding in light of the discussion.
MA.3.3.OA.D.8	Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.
CRP.K-12.CRP1.1	Career-ready individuals understand the obligations and responsibilities of being a member of a community, and they demonstrate this understanding every day through their interactions with others. They are conscientious of the impacts of their decisions on others and the environment around them. They think about the near-term and long-term consequences of their actions and seek to act in ways that contribute to the betterment of their teams, families, community and workplace. They are reliable and consistent in going beyond the minimum expectation and in participating in activities that serve the greater good.
LA.3.L.3.4	Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.
MA.3.3.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.3.3.NBT	Number and Operations in Base Ten
MA.3.3.NBT.A	Use place value understanding and properties of operations to perform multi-digit arithmetic.
MA.3.3.OA.B	Understand properties of multiplication and the relationship between multiplication and division.
MA.3.3.NBT.A.1	Use place value understanding to round whole numbers to the nearest 10 or 100.
MA.3.3.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.3.3.OA.B.5	Apply properties of operations as strategies to multiply and divide.
MA.3.3.OA.B.6	Understand division as an unknown-factor problem.
MA.3.3.OA.C	Multiply and divide within 100.
LA.3.RF.3.4.A	Read grade-level text with purpose and understanding.

LA.3.SL.3.1.A	Explicitly draw on previously read text or material and other information known about the topic to explore ideas under discussion.
CRP.K-12.CRP1	Act as a responsible and contributing citizen and employee.
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.A.CS2	Select and use applications effectively and productively.

Essential Questions

How can you add and subtract whole numbers and decide if an answer is reasonable?

How do you know when an estimate will be close to an exact answer?

When do you regroup to add or subtract whole numbers?

How might you decide which strategy to use to add or subtract?

How can you use multiplication to find how many in all?

What models can help you multiply?

How can you use skip counting to help you multiply?

What strategies can you use to multiply?

How are patterns and multiplication related?

Student Learning Objectives

Critical Area : Develop Understanding of multiplication and division and strategies for multiplication and division within 100.

Chapter 1

- Identify and describe whole-number patterns and solve problems
- Round 2 and 3 digit numbers to the nearest ten or hundred.

- Use compatible numbers and rounding to estimate sums and differences
- Use a variety of strategies to find sums and differences mentally
- Use Commutative and Associative Properties of Addition to add more than two addends
- Use a variety of strategies to add and subtract three digit numbers
- Solve addition and subtraction problems by using strategy draw a diagram

Chapter 3

- Model and skip count objects in equal groups or on a number line to find how many there are
- Write an addition sentence and multiplication sentence for a model
- Solve one and two step problems by using strategy draw a diagram
- Use arrays to model products and factors
- Model the Commutative Property of Multiplication and use it to find products
- Model multiplication with factors 1 and 0

Chapter 4

- Use a variety of strategies to multiply with the factors 2,3,4,5,,6,7,8,9,and 10
- Use the Distributive Property to find products by breaking apart arrays
- Use the Associative Property of Multiplication to multiply with three factors
- Identify and explain patterns on the multiplication table
- Use Distributive property to find products
- Solve multiplication problems by using strategy make a table

Materials

Go Math Print Resources:

Student Edition 1, 3,4,

Practice and Homework (in the Student Edition)

Reteach (in the Chapter Resources)

Enrich (in the Chapter Resources)

Grab-and-Go Centers Kit

Chapter 1 - Activity Cards 1,3,5

Chapter 3 - Activity Cards 7, 15

Chapter 4 - Activity Card 7, 15

Readers

Chapter 1 - More Acorns; So many Seashells, Soccer Bash

Chapter 3 - Collections Times Four; Here's What I Do;; The Workshop

Chapter 4 - Collections Times Four, Here's What I Do; The Workshop, Party Plans By Number

Games

Chapter 1 - Auto Addition , Picnic Pattern Path, Time to Subtract

Chapter 3 - Multiplication Bingo

Chapter 4 - Guess my Numbers; Multiplication Bingo

Place Value Manipulative

Math Whiteboards

Go Math Digital Resources:

iStudent Edition

eTeacher Edition

Personal Math Trainer

Math on the Spot Video

Real World Video

Animated Math Models

iTools

HMH Mega Math

i Pad

Computer

Math Boards

Achieve the Core:

<http://achievethecore.org/page/2853/go-math-k-5-guidance-documents>

Activities

Chapter 1

Real World Project - Inventing Toys

Vocabulary Game - Going to New York City

Lesson 1.1 Number Patterns

Lesson 1.2 Round to the Nearest 10

Lesson 1.3 Estimate Sums

Lesson 1.4 Mental Math Strategies for Addition

Lesson 1.5 Use Properties to Add

Lesson 1.6 Use the Break Apart Strategy to Add

Lesson 1.7 Use Place Value to Add

Lesson 1.8 Estimate Differences

Lesson 1.9 Mental Math Strategies for Subtraction

Lesson 1.10 Use Place Value to Subtract

Lesson 1.11 Combine Place Values to Subtract

Lesson 1.12 Model Addition and Subtraction

Chapter 3

Vocabulary Match Up

3.1 Count Equal Groups

3.2 Relate Multiplication and Addition

3.3 Skip count on a Number Line

3.4 Model Multiplication

3.5 Model with Arrays

3.6 Commutative Property of Multiplication

3.7 Multiply with 1 and 0

Chapter 4

Vocabulary- Guess the Word

4.1 Multiply with 2 and 4

4.2 Multiply with 5 and 10

4.3 Multiply with 3 and 6

4.4 Distributive Property

4.5 Multiply with 7

4.6 Associative Property of Multiplication

4.7 Patterns on Multiplication Table

4.8 Multiply with 8

4.9 Multiply with 9

4.10 Problem Solving Multiplication

Other Educational Resources

[3.OA.A.2 Fish Tanks](#)

[3.OA.A.3 Analyzing Word Problems Involving Multiplication](#)

[3.OA.A.4 Finding the unknown in a division equation](#)

[3.MD.C.6 Finding the Area of Polygons](#)

[3.MD.C.7a India's Bathroom Tiles](#)

[3.NBT.A.1 Rounding to 50 or 500](#)

[3.NBT.A.1 Rounding to the Nearest Ten and Hundred](#)

[3.NBT.A.3 How Many Colored Pencils?](#)

Diagnostic:

Show What You Know

Digital Personal Math Trainer

Formative:

Lesson Quick Check

Mid-Chapter Checkpoint

Digital Personal Math Trainer

- Assessment Animation
- Assessment Video

Summative:

Chapter Review/Test

Chapter Test

Performance Assessment Task

Digital Personal Math Trainer

Fact Fluency

- Fluency Standard Lessons (Student Edition)
- Fluency Builder(Teacher Edition)
- Strategies and Practice for Skills and Facts Fluency
- Teacher Resource Book
- HMH Mega Math

- Personal Math Trainer: Standards Quizzes
- Animated Math Models

Mad Minutes

Flash Cards

Fast Math

Multiplication websites

MA.3.3.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.3.3.OA.C.7

Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.

Standards for Mathematical Processes

MP.1 Make sense of problems and persevere in solving them.

MP.2 Reason abstractly and quantitatively.

MP.3 Construct viable arguments and critique the reasoning of others.

MP.4 Model with mathematics

MP.5 Use appropriate tools strategically.

MP.6 Attend to precision.

MP.7 Look for and make use of structure.

MP.8 Look for and express regularity in repeated reasoning.

Accommodations and Modifications

Personal Math Trainer

-Leveled quizzes and tests

-Leveled performance tasks

- Grab & Go Differentiated Centers
- Intensive Intervention Resource
- Strategic Intervention Resource
- Reteach activities
- RTI tiered resources and activities
- Math on the Spot videos