

Curriculum Map: 2nd Grade Math 2020-2021

Course: Math2 Sub-topic: General

Grade(s): 2

Course Description: This is a full-year Math Course that covers PA Common Core Standards for second grade students. Second grade students will develop concepts and explore connections using manipulatives and models during whole and small group instruction. The students will build problem-solving skills and strategies, count, compare, and write numbers to 1,000, add, subtract, multiply, and divide using bar models, recognize bills and coins, identify fractional parts, understand customary measurements of length, tell time, use pictures to show data, and classify lines and surfaces.

Course Textbooks, Workbooks, Materials Citations: Cavendish, Marshall (2013). *Math In Focus: Teacher Edition*. Boston: Houghton Mifflin Harcourt.
Cavendish, Marshall (2015). *Math In Focus: Student Workbook 2A and 2B*. Boston: Houghton Mifflin Harcourt.
Manipulative sets

Unit: Unit 1 Numbers to 1,000

Timeline: Week 1 to 2

Unit Description: Count and compare numbers to 1,000.

Unit Essential Questions: How is mathematics used to quantify, compare, represent, and model numbers?
How can recognizing repetition or regularity assist in solving problems more efficiently?
How are relationships represented mathematically?
What does it mean to estimate or analyze numerical quantities?
What makes a tool and/or strategy appropriate for a given task?
How can recognizing repetition or regularity assist in solving problems more efficiently?

Unit Big Ideas: Mathematical relationships among numbers can be represented, compared, and communicated.
Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.
Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.
Patterns exhibit relationships that can be extended, described, and generalized.

Unit Materials: Math in Focus Student workbook A
Base-ten blocks
Place value mats
One ten-sided die
Number cubes
Number chart

Unit Chapter 1 Pretest
Assignments: Math In Focus Workbook A pg. 1-24
Chapter 1 Assessment

Unit Key Terminology & Definitions: hundred
hundreds
thousand
standard form
word form
expanded form
greater than
less than
greatest
least
more than
less than

STANDARDS: STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.1 \(Advanced\)](#) Use place-value concepts to represent amounts of tens and ones and to compare three digit numbers.

[CC.2.1.2.B.2 \(Advanced\)](#) Use place-value concepts to read, write, and skip count to 1000.

(* standards consolidated from Topic level)

Topic: 1.1 Counting

Minutes for Topic: 120

**Core Lesson
Student Learning
Objectives:**

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.2 \(Advanced\)](#) Use place-value concepts to read, write, and skip count to 1000.

Topic: 1.2 Place Value

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.2 \(Advanced\)](#) Use place-value concepts to read, write, and skip count to 1000.

Topic: 1.3 Comparing Numbers

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.1 \(Advanced\)](#) Use place-value concepts to represent amounts of tens and ones and to compare three digit numbers.

[CC.2.1.2.B.2 \(Advanced\)](#) Use place-value concepts to read, write, and skip count to 1000.

Topic: 1.4 Order & Pattern

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.1 \(Advanced\)](#) Use place-value concepts to represent amounts of tens and ones and to compare three digit numbers.

[CC.2.1.2.B.2 \(Advanced\)](#) Use place-value concepts to read, write, and skip count to 1000.

Unit: Unit 2 Addition up to 1,000

Timeline: Week 3

Unit Description: Addition up to three-digit numbers with and without regrouping is the main focus of this chapter.

Unit Essential Questions: How can mathematics support effective communication?

How are relationships represented mathematically?

What does it mean to estimate or analyze numerical quantities?

What makes a tool and/or strategy appropriate for a given task?

Unit Big Ideas: Mathematical relationships among numbers can be represented, compared, and communicated.

Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.

Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.

Unit Materials: Math In Focus Student Workbook A

Base-ten blocks

Place Value Mat

Ten-sided dice

Index cards

Number cards

Unit Assignments: Chapter 2 Pretest

Math in Focus Workbook A pg. 25-48

Chapter 2 Assessment

Unit Key Terminology & Definitions: Add

Place-value chart

Regroup

STANDARDS: STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.3 \(Advanced\)](#) Use place-value understanding and properties of operations to add and subtract within 1000.

[CC.2.2.2.A.1 \(Advanced\)](#) Represent and solve problems involving addition and subtraction within 100.

(* standards consolidated from Topic level)

Topic: 2.1 Addition Without Regrouping

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.3 \(Advanced\)](#) Use place-value understanding and properties of operations to add and subtract within 1000.

Topic: 2.2 Addition with Regrouping in Ones

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.3 \(Advanced\)](#) Use place-value understanding and properties of operations to add and subtract within 1000.

[CC.2.2.2.A.1 \(Advanced\)](#) Represent and solve problems involving addition and subtraction within 100.

Topic: 2.3 Addition with Regrouping in Tens

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.3 \(Advanced\)](#) Use place-value understanding and properties of operations to add and subtract within 1000.

[CC.2.2.2.A.1 \(Advanced\)](#) Represent and solve problems involving addition and subtraction within 100.

Topic: 2.4 Addition with Regrouping in Ones & Tens

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.3 \(Advanced\)](#) Use place-value understanding and properties of operations to add and subtract within 1000.

[CC.2.2.2.A.1 \(Advanced\)](#) Represent and solve problems involving addition and subtraction within 100.

Unit: Unit 3 Subtraction up to 1,000

Timeline: Week 4

Unit Description: Subtraction up to 3-digit numbers with and without regrouping is the main focus of this chapter.

Unit Essential Questions: How can mathematics support effective communication?
How are relationships represented mathematically?
What does it mean to estimate or analyze numerical quantities?
What makes a tool and/or strategy appropriate for a given task?

Unit Big Ideas: Mathematical relationships among numbers can be represented, compared, and communicated.

Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.

Patterns exhibit relationships that can be extended, described, and generalized.

Unit Materials: Math in Focus Teacher manual A
Math In Focus Student workbook A

Place-value Mat
Base-ten Blocks
Ten-sided Dice
Index Cards
Place-value Chart

Unit Assignments: Chapter 3 Pretest
Math In Focus Student workbook A pg. 49-72
Chapter 3 Assessment

Unit Key**Terminology &** Subtract**Definitions:****STANDARDS: STANDARDS**

STATE: PA Core Standards (2014)

[CC.2.1.2.B.3](#)
(Advanced)

Use place-value understanding and properties of operations to add and subtract within 1000.

[CC.2.2.2.A.1](#)
(Advanced)

Represent and solve problems involving addition and subtraction within 100.

(* standards consolidated from Topic level)

Topic: 3.1 Subtraction without Regrouping

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.3](#) (Advanced)

Use place-value understanding and properties of operations to add and subtract within 1000.

[CC.2.2.2.A.1](#) (Advanced)

Represent and solve problems involving addition and subtraction within 100.

Topic: 3.2 Subtraction with Regrouping in Tens & Ones

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.3](#) (Advanced)

Use place-value understanding and properties of operations to add and subtract within 1000.

[CC.2.2.2.A.1](#) (Advanced)

Represent and solve problems involving addition and subtraction within 100.

Topic: 3.3 Subtraction with Regrouping in Hundreds & Tens

Minutes for Topic: 60

Topic: 3.4 Subtraction with Regrouping in Hundreds, Tens and Ones

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.3](#) (Advanced)

Use place-value understanding and properties of operations to add and subtract within 1000.

[CC.2.2.2.A.1](#) (Advanced)

Represent and solve problems involving addition and subtraction within 100.

Topic: 3.5 Subtraction Across Zeros

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.3](#) (Advanced)

Use place-value understanding and properties of operations to add and subtract within 1000.

[CC.2.2.2.A.1](#) (Advanced)

Represent and solve problems involving addition and subtraction within 100.

Topic: Assessment Day

Minutes for Topic: 60

Unit: Unit 4 Using Bar Models: Addition and Subtraction

Timeline: Week 5 to 6

Unit**Description:** Addition and Subtraction using bar models is the main focus of this chapter.

Unit Essential Questions: How is mathematics used to quantify, compare, represent, and model numbers?
How can mathematics support effective communication?
How are relationships represented mathematically?
How can expressions, equations and inequalities be used to quantify, solve, model, and/or analyze mathematical situations?
How can recognizing repetition or regularity assist in solving problems more efficiently?

Unit Big Ideas: Mathematical relationships among numbers can be represented, compared, and communicated.
Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.
Patterns exhibit relationships that can be extended, described, and generalized.

Unit Materials: Math In Focus Teacher Manual A
Math In Focus Student Workbook A pg. 73-106

connecting cubes
paper bags
paper strips
counters

Unit Assignments: Chapter 4 Pretest
Math In Focus Student Workbook A pg. 73-106
Chapter 4 Assessment

Unit Key Terminology & Definitions: join
set
take away
compare

STANDARDS: STANDARDS
STATE: PA Core Standards (2014)
[CC.2.2.2.A.1 \(Advanced\)](#) Represent and solve problems involving addition and subtraction within 100.
(* standards consolidated from Topic level)

Topic: 4.1 Using Part-Part-Whole in Addition & Subtraction

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.1 \(Advanced\)](#) Represent and solve problems involving addition and subtraction within 100.

Topic: 4.2 Adding On & Taking Away Sets

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.1 \(Advanced\)](#) Represent and solve problems involving addition and subtraction within 100.

Topic: 4.3 Comparing Two Sets

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.1 \(Advanced\)](#) Represent and solve problems involving addition and subtraction within 100.

Topic: 4.4 Real-World Problems: Two Step Problems

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.1 \(Advanced\)](#) Represent and solve problems involving addition and subtraction within 100.

Unit: Unit 5 Multiplication & Division

Timeline: Week 7

Unit

Description: Introducing the basics of multiplication and division is the main focus of this chapter.

Unit Essential Questions: How is mathematics used to quantify, compare, represent, and model numbers?

How are relationships represented mathematically?

How can patterns be used to describe relationships in mathematical situations?

Unit Big Ideas: Mathematical relationships among numbers can be represented, compared, and communicated.

Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.

Patterns exhibit relationships that can be extended, described, and generalized.

Unit Materials: Math In Focus Teacher Manual A
Math In Focus Student Workbook A

counters
counting cubes
craft sticks
index cards

Unit Key

Terminology & Definitions:

times
equal
group
multiply
repeated addition
multiplication sentence
multiplication sentence
multiplication story
share
divide
equal groups
division sentence
repeated subtraction

STANDARDS: STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3 \(Advanced\)](#) Work with equal groups of objects to gain foundations for multiplication.

(* standards consolidated from Topic level)

Topic: 5.1 How to Multiply

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3 \(Advanced\)](#) Work with equal groups of objects to gain foundations for multiplication.

Topic: 5.2 How to Divide

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3 \(Advanced\)](#) Work with equal groups of objects to gain foundations for multiplication.

Topic: 5.3 Real-World Problems: Multiplication & Division

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3 \(Advanced\)](#) Work with equal groups of objects to gain foundations for multiplication.

Unit: Unit 6 Multiplication Table 2, 5, & 10

Timeline: Week 8 to 9

Unit

Description: Counting and comparing numbers to 10 are the main focus of this chapter.

Unit Essential Questions: How is mathematics used to quantify, compare, represent, and model numbers?

How are relationships represented mathematically?

How can patterns be used to describe relationships in mathematical situations?

Unit Big Ideas: Mathematical relationships among numbers can be represented, compared, and communicated.

Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.

Patterns exhibit relationships that can be extended, described, and generalized.

Unit Materials: Math In Focus Teacher Manual A
Math In Focus Student Workbook A

hundreds chart
counters
number cube
number cards from 1 to 10
coin
stickers
dot paper of 5
spinner card
paper clip
dot paper of 10

Unit Chapter 6 Pretest

Assignments: Math In Focus Student Workbook pg. 127-164
Chapter 6 Assessment

Unit Key Skip-count

Terminology & Dot paper

Definitions: Related multiplication facts

STANDARDS: STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3](#)
(Advanced)

Work with equal groups of objects to gain foundations for multiplication.

(* standards consolidated from Topic level)

Topic: 6.1 Multiplying 2: Skip Counting

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3](#) (Advanced)

Work with equal groups of objects to gain foundations for multiplication.

Topic: 6.2 Multiplying: Using Dot Paper

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3](#) (Advanced)

Work with equal groups of objects to gain foundations for multiplication.

Topic: 6.3 Multiplying 5- Skip Counting

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3](#) (Advanced)

Work with equal groups of objects to gain foundations for multiplication.

Topic: 6.4 Multiplying 5: Using Dot Paper

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3](#) (Advanced)

Work with equal groups of objects to gain foundations for multiplication.

Topic: 6.5 Multiplying 10: Skip Counting & Using Dot Paper

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3](#) (Advanced)

Work with equal groups of objects to gain foundations for multiplication.

Topic: 6.6 Divide Using Related Multiplication Facts

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3](#) (Advanced)

Work with equal groups of objects to gain foundations for multiplication.

Unit: Unit 15 Multiplication Tables 3 and 4

Timeline: Week 10 to 11

Unit

Description: Using known multiplication facts to find other multiplication and division facts.

Unit Essential Questions:

How is mathematics used to quantify, compare, represent, and model numbers?

How are relationships represented mathematically?

How can patterns be used to describe relationships in mathematical situations?

Unit Big Ideas: Mathematical relationships among numbers can be represented, compared, and communicated.

Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.

Patterns exhibit relationships that can be extended, described, and generalized.

Unit Materials: Math In Focus Teacher Manual B
Math In Focus Student Workbook B

number wheel
counters
dot paper of 3
number cube
number cards
number stickers from 2 to 4
dot paper of 4

Unit Assignments: Chapter 15 Pretest
Math In Focus Student Workbook B pg. 133-154
Chapter 15 Assessment

Unit Key Terminology & Definitions: skip-count
dot paper
related multiplication facts

STANDARDS: STANDARDS
STATE: PA Core Standards (2014)
[CC.2.2.2.A.3 \(Advanced\)](#) Work with equal groups of objects to gain foundations for multiplication.

Topic: 15.1 Multiplication 3: Skip-Counting

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3 \(Advanced\)](#) Work with equal groups of objects to gain foundations for multiplication.

Topic: 15.2 Multiplying 3: Using Dot Paper

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3 \(Advanced\)](#) Work with equal groups of objects to gain foundations for multiplication.

Topic: 15.3 Multiplying 4: Skip-Counting

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3 \(Advanced\)](#) Work with equal groups of objects to gain foundations for multiplication.

Topic: 15.4 Multiplying 4: Using Dot Paper

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3 \(Advanced\)](#) Work with equal groups of objects to gain foundations for multiplication.

Topic: 15.5 Divide Using Related Multiplication Facts

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3 \(Advanced\)](#) Work with equal groups of objects to gain foundations for multiplication.

Unit: Unit 10 Mental Math and Estimation

Timeline: Week 12 to 13

Unit

Description: Mental math and estimation are the main focus of this chapter.

Unit Essential Questions: How is mathematics used to quantify, compare, represent, and model numbers?

How can mathematics support effective communication?

How are relationships represented mathematically?

How can expressions, equations and inequalities be used to quantify, solve, model, and/or analyze mathematical situations?

How can patterns be used to describe relationships in mathematical situations?

Unit Big Ideas: Mathematical relationships among numbers can be represented, compared, and communicated.

Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.

Patterns exhibit relationships that can be extended, described, and generalized.

Unit Materials: Math In Focus Teacher Manual B
Math In Focus Student Workbook B

number cube
recording sheet
number lines

Unit Chapter 10 Pretest

Assignments: Math In Focus Student Workbook B pg. 1-22
Chapter 10 Assessment

Unit Key Terminology & Definitions: sum
add mentally
difference
subtract mentally
number line
about
round
nearest ten
estimate
reasonable

STANDARDS: STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.2 \(Advanced\)](#) Use place-value concepts to read, write, and skip count to 1000.

[CC.2.1.2.B.3 \(Advanced\)](#) Use place-value understanding and properties of operations to add and subtract within 1000.

[CC.2.2.2.A.2 \(Advanced\)](#) Use mental strategies to add and subtract within 20.

(* standards consolidated from Topic level)

Topic: 10.1 Meaning of Sum

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.2 \(Advanced\)](#) Use mental strategies to add and subtract within 20.

Topic: 10.2 Mental Addition

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.2 \(Advanced\)](#) Use mental strategies to add and subtract within 20.

Topic: 10.3 Meaning of Difference

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.3 \(Advanced\)](#) Use place-value understanding and properties of operations to add and subtract within 1000.

[CC.2.2.2.A.2 \(Advanced\)](#) Use mental strategies to add and subtract within 20.

Topic: 10.4 Mental Subtraction

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.2 \(Advanced\)](#) Use mental strategies to add and subtract within 20.

Topic: 10.5 Rounding Numbers to Estimate

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.1.2.B.2 \(Advanced\)](#) Use place-value concepts to read, write, and skip count to 1000.

[CC.2.2.2.A.2 \(Advanced\)](#) Use mental strategies to add and subtract within 20.

Unit: Unit 11 Money

Timeline: Week 14 to 15

Unit Counting and comparing amounts of money in bills and coins.

Description:

Unit Essential What does it mean to estimate or analyze numerical quantities?

Questions:

When is it appropriate to estimate versus calculate?

What makes a tool and/or strategy appropriate for a given task?

Unit Big Ideas: Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.

Unit Materials: Math in Focus Teacher Manual B
Math In Focus Student Workbook B
Set of paper bills

Dollar and cents table

Unit Chapter 11 Pretest
Assignments: Math In Focus Student Workbook B pg.
Chapter 11 Assessment

Unit Key \$1 bill
Terminology & Definitions: \$5 bill
\$10 bill
\$20 bill
cent sign
dollar sign
decimal point
table

STANDARDS: STANDARDS
STATE: PA Core Standards (2014)
[CC.2.4.2.A.3 \(Advanced\)](#) Solve problems and make change using coins and paper currency with appropriate symbols.

(* standards consolidated from Topic level)

Topic: 11.1 Coins and Bills

Minutes for Topic: 180

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.3 \(Advanced\)](#) Solve problems and make change using coins and paper currency with appropriate symbols.

Topic: 11.2 Comparing Amounts of Money

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.3 \(Advanced\)](#) Solve problems and make change using coins and paper currency with appropriate symbols.

Topic: 11.3 Real-World Problems: Money

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.3 \(Advanced\)](#) Solve problems and make change using coins and paper currency with appropriate symbols.

Unit: Unit 12 Fractions

Timeline: Week 16

Unit Description: Using fractions to describe equal parts of a whole.

Unit Essential Questions: How can patterns be used to describe relationships in mathematical situations?
How can recognizing repetition or regularity assist in solving problems more efficiently?
How are spatial relationships, including shape and dimension, used to draw, construct, model, and represent real situations or solve problems?

How can the application of the attributes of geometric shapes support mathematical reasoning and problem solving?

How can geometric properties and theorems be used to describe, model, and analyze situations?

Unit Big Ideas: Patterns exhibit relationships that can be extended, described, and generalized.

Geometric relationships can be described, analyzed, and classified based on spatial reasoning and/or visualization.

Unit Materials: Math in Focus Teacher Manual B
Math In Focus Student Workbook B
connecting cubes paper rectangles set of triangle cards paper strip fraction models pieces of a circle
brown bag

Unit Assignments: Chapter 12 Pretest
Math In Focus Student Workbook B pg. 45-62
Chapter 12 Assessment

Unit Key Terminology & Definitions: equal
unequal
whole
fraction
one-half
one-third
one-fourth
unit fraction
same
greater than
less than
like fractions

STANDARDS: STANDARDS
STATE: PA Core Standards (2014)
[CC.2.3.2.A.2 \(Advanced\)](#) Use the understanding of fractions to partition shapes into halves, quarters, and thirds.

(* standards consolidated from Topic level)

Topic: 12.1 Understanding Fractions

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.3.2.A.2 \(Advanced\)](#) Use the understanding of fractions to partition shapes into halves, quarters, and thirds.

Topic: 12.2 Comparing Fractions

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.3.2.A.2 \(Advanced\)](#) Use the understanding of fractions to partition shapes into halves, quarters, and thirds.

Topic: 12.3 Adding and Subtraction Like Fractions

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.3.2.A.2 \(Advanced\)](#) Use the understanding of fractions to partition shapes into halves, quarters, and thirds.

Unit: Unit 13 Customary Measurement of Length

Timeline: Week 17 to 18

Unit Description: Measuring and comparing how long and how tall things are by using rulers and customary units of measure.

Unit Essential Questions: What does it mean to estimate or analyze numerical quantities?

When is it appropriate to estimate versus calculate?

What makes a tool and/or strategy appropriate for a given task?

Why does "what" we measure influence "how" we measure?

In what ways are the mathematical attributes of objects or processes measured, calculated and/or interpreted?

How precise do measurements and calculations need to be?

Unit Big Ideas: Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.

Measurement attributes can be quantified, and estimated using customary and non-customary units of measure.

Unit Materials: Math in Focus Teacher Manual B
Math In Focus Student Workbook B

foot ruler
yardstick
measurement chart
foot-long string

Unit Assignments: Chapter 13 Pretest
Math In Focus Student Workbook B pg.
Chapter 13 Assessment

Unit Key Terminology & Definitions: foot/feet
length
ruler
unit
width
height
longest
shortest
inch

STANDARDS: STANDARDS
STATE: PA Core Standards (2014)
[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.

(* standards consolidated from Topic level)

Topic: 13.1 Measuring in Feet

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

Topic: 13.2 Comparing Lengths in Feet

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.

Topic: 13.3 Measuring in Inches

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

Topic: 13.4 Comparing Lengths in Inches

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.

Topic: 13.5 Real-World Problems: Customary Length

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.

Unit: Unit 14 Time

Timeline: Week 19

Unit

Description: Telling the time of day in different ways.

Unit Essential Questions: What does it mean to estimate or analyze numerical quantities?

When is it appropriate to estimate versus calculate?

What makes a tool and/or strategy appropriate for a given task?

Unit Big Ideas: Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.

Unit Materials: Math in Focus Teacher Manual B

Math In Focus Student Workbook B

analog clock
digital clock
paper clock
blank clock faces
TV Program chart

Unit Chapter 14 Pretest
Assignments: Math In Focus Student Workbook B pg. 97-132
Chapter 14 Assessment

Unit Key Terminology & Definitions: hour hand
minute hand
minute
hour
o'clock
after
clock face
A.M.
P.M.

STANDARDS: STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.2 \(Advanced\)](#) Tell and write time to the nearest five minutes using both analog and digital clocks.

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.

(* standards consolidated from Topic level)

Topic: 14.1 The Minute Hand

Minutes for Topic: 60

Topic: 14.2 Reading and Writing Time

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.2 \(Advanced\)](#) Tell and write time to the nearest five minutes using both analog and digital clocks.

Topic: 14.3 Using A.M. and P.M.

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.2 \(Advanced\)](#) Tell and write time to the nearest five minutes using both analog and digital clocks.

Topic: 14.4 Elapsed Time

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.2 \(Advanced\)](#) Tell and write time to the nearest five minutes using both analog and digital clocks.

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.

Unit: Unit 16 Using Bar Models: Multiplication and Division

Timeline: Week 20

Unit

Description: Using bar models to solve real-world problems involving multiplication and division.

Unit Essential Questions: How is mathematics used to quantify, compare, represent, and model numbers?

Questions:

How are relationships represented mathematically?

How can patterns be used to describe relationships in mathematical situations?

Unit Big Ideas: Mathematical relationships among numbers can be represented, compared, and communicated.

Mathematical relationships can be represented as expressions, equations and inequalities in mathematical situations.

Patterns exhibit relationships that can be extended, described, and generalized

Unit Materials: Math in Focus Teacher Manual B
Math In Focus Student Workbook B

counters

bar model paper strips

Unit

Chapter 16 Pretest

Assignments:

Math In Focus Student Workbook B pg.

Chapter 16 Assessment

Unit Key

equal groups

Terminology &

Definitions:

multiply

divide

STANDARDS: STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3](#)

[\(Advanced\)](#)

Work with equal groups of objects to gain foundations for multiplication.

[CC.2.4.2.A.3](#)

[\(Advanced\)](#)

Solve problems and make change using coins and paper currency with appropriate symbols.

[CC.2.4.2.A.6](#)

[\(Advanced\)](#)

Extend the concepts of addition and subtraction to problems involving length.

(* standards consolidated from Topic level)

Topic: 16.1 Real-World Problems: Multiplication

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3 \(Advanced\)](#)

Work with equal groups of objects to gain foundations for multiplication.

Topic: 16.2 Real-World Problems: Division

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.2.2.A.3 \(Advanced\)](#) Work with equal groups of objects to gain foundations for multiplication.

Topic: 16.3 Real-World Problems: Measurement and Money

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.3 \(Advanced\)](#) Solve problems and make change using coins and paper currency with appropriate symbols.

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.

Unit: Unit 17 Picture Graphs

Timeline: Week 21

Unit

Description: Using pictures to show data about things that can be counted.

Unit Essential Questions: What does it mean to estimate or analyze numerical quantities?

What makes a tool and/or strategy appropriate for a given task?

How can data be organized and represented to provide insight into the relationship between quantities?

How does the type of data influence the choice of display?

How can probability and data analysis be used to make predictions?

Unit Big Ideas: Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.

Mathematical relations and functions can be modeled through multiple representations and analyzed to raise and answer questions.

Data can be modeled and used to make inferences.

Unit Materials: Math in Focus Teacher Manual B
Math In Focus Student Workbook B

paper clip
counter
colored pencils

Unit Assignments: Chapter 17 Pretest
Math In Focus Student Workbook B pg. 179- 194
Chapter 17 Assessment

Unit Key Terminology & Definitions: picture graph
key
symbol
record
tally chart

STANDARDS: STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.4 \(Advanced\)](#) Represent and interpret data using line plots, picture graphs, and bar graphs.

(* standards consolidated from Topic level)

Topic: 17.1 Reading Picture Graphs with Scales

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.4 \(Advanced\)](#) Represent and interpret data using line plots, picture graphs, and bar graphs.

Topic: 17.2 Making Picture Graphs

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.4 \(Advanced\)](#) Represent and interpret data using line plots, picture graphs, and bar graphs.

Topic: 17.3 Real-World Problems: Picture Graphs

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.4 \(Advanced\)](#) Represent and interpret data using line plots, picture graphs, and bar graphs.

Unit: Unit 18 Lines and Surfaces

Timeline: Week 22 to 23

Unit

Description: Identifying properties of parts of lines, curves, and surfaces.

Unit Essential Questions: How are spatial relationships, including shape and dimension, used to draw, construct, model, and represent real situations or solve problems?

Unit Big Ideas: Patterns exhibit relationships that can be extended, described, and generalized.

Geometric relationships can be described, analyzed, and classified based on spatial reasoning and/or visualization.

Unit Materials: Math in Focus Teacher Manual B
Math In Focus Student Workbook B

solid shapes
flat and curved surface table

Unit

Assignments: Chapter 18 Pretest
Math In Focus Student Workbook B pg. 209-224
Chapter 18 Assessment

Unit Key

Terminology & Definitions: part of a line
curve
flat surface
curved surface

slide
stack
roll

STANDARDS: STANDARDS

STATE: PA Core Standards (2014)

[CC.2.3.2.A.1 \(Advanced\)](#) Analyze and draw two- and three-dimensional shapes having specified attributes.

(* standards consolidated from Topic level)

Topic: 18.1 Parts of Lines and Curves

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.3.2.A.1 \(Advanced\)](#) Analyze and draw two- and three-dimensional shapes having specified attributes.

Topic: 18.2 Flat and Curved Surfaces

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.3.2.A.1 \(Advanced\)](#) Analyze and draw two- and three-dimensional shapes having specified attributes.

Unit: Unit 19 Shapes and Patterns

Timeline: Week 24 to 25

Unit

Description: Identifying, classifying, and combining plane and solid shapes.

Unit Essential Questions: How can patterns be used to describe relationships in mathematical situations?

How can recognizing repetition or regularity assist in solving problems more efficiently?

How are spatial relationships, including shape and dimension, used to draw, construct, model, and represent real situations or solve problems?

Unit Big Ideas: Patterns exhibit relationships that can be extended, described, and generalized.

Geometric relationships can be described, analyzed, and classified based on spatial reasoning and/or visualization.

Unit Materials: Math in Focus Teacher Manual B
Math In Focus Student Workbook B

attribute blocks
plane shapes recording sheet
shapes to combine
shapes to separate
rectangle cut-outs
figures a, b, and c
dot grid paper
square grid paper
tracing paper

Unit

Assignments: Chapter 19 Pretest
Math In Focus Student Workbook B pg. 225-243
Chapter 19 Assessment

Unit Key Terminology & Definitions: plane shape
hexagon
trapezoid
figure
pattern
pattern unit
shape
repeating pattern
size
turning

STANDARDS: STANDARDS

STATE: PA Core Standards (2014)

[CC.2.3.2.A.1 \(Advanced\)](#) Analyze and draw two- and three-dimensional shapes having specified attributes.

(* standards consolidated from Topic level)

Topic: 19.1 Plane Shapes

Minutes for Topic: 180

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.3.2.A.1 \(Advanced\)](#) Analyze and draw two- and three-dimensional shapes having specified attributes.

Topic: 19.2 Solid Shapes

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.3.2.A.1 \(Advanced\)](#) Analyze and draw two- and three-dimensional shapes having specified attributes.

Topic: 19.3 Making Patterns

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.3.2.A.1 \(Advanced\)](#) Analyze and draw two- and three-dimensional shapes having specified attributes.

Unit: Unit 7 Metric Measurement & Length

Timeline: Week 26 to 27

Unit Description: Measuring and comparing lengths accurately using centimeter rulers and meter sticks is the main focus of this chapter.

Unit Essential Questions: What does it mean to estimate or analyze numerical quantities?

When is it appropriate to estimate versus calculate? What makes a tool and/or strategy appropriate for a given task?

Why does "what" we measure influence "how" we measure? In what ways are the mathematical attributes of objects or processes measured, calculated and/or interpreted?

How precise do measurements and calculations need to be?

Unit Big Ideas: Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.

Measurement attributes can be quantified, and estimated using customary and noncustomary units of measure.

Unit Materials: Math In Focus Teacher Manual A
Math In Focus Workbook A

meterstick
measuring tape
measuring charts
index cards
paper

Unit Chapter 7 Pretest
Assignments: Math In Focus Student Workbook pg. 192-
Chapter 7 Assessment

Unit Key Terminology & Definitions: meterstick
length
meter
unit
width
height
taller, tallest
shorter, shortest
longer, longest
centimeter

STANDARDS: STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.

(* standards consolidated from Topic level)

Topic: 7.1 Measuring in Meters

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

Topic: 7.2 Comparing Lengths in Meters

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.

Topic: 7.3 Measuring in Centimeters

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

Topic: 7.4 Comparing Lengths in Centimeters

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.

Topic: 7.5 Real-World Problems Metric Length

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.

Unit: Unit 8 Mass

Timeline: Week 28 to 29

Unit

Description: Measuring and comparing mass accurately in kilograms and grams using a measuring scale.

Unit Essential Questions: What does it meant to analyze numerical quantities?

When is it is appropriate to estimate versus calculate?

What makes a tool and/or strategy appropriate for a given task?

Why does "what" we measure influence "how" we measure?

In what ways are the mathematical attributes of objects or processes measured, calculated and/or interpreted?

How precise do measurements and calculations need to be?

Unit Big Ideas: Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.

Measurement attributes can be quantified, and estimated using customary and noncustomary units of measure.

Unit Materials: Math in Focus Teacher Manual A
Math In Focus Student Workbook A

- measuring scale
- balance scale
- mass of objects chart
- kilogram scales
- index cards
- bag of beans
- recording mass chart

Unit Assignments: Chapter 8 Pretest

Math In Focus Student Workbook A pg. 191-216
Chapter 8 Assessment

Unit Key Terminology & Definitions: kilogram

- mass
- measuring scale
- as heavy as
- less than
- more than
- heavier than
- lighter than
- heaviest
- lightest
- gram

STANDARDS: STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

[CC.2.4.2.A.6](#) Extend the concepts of addition and subtraction to

[\(Advanced\)](#) problems involving length.

(* standards consolidated from Topic level)

Topic: 8.1 Measuring in Kilograms

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

Topic: 8.2 Comparing Masses in Kilograms

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.

Topic: 8.3 Measuring in Grams

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

Topic: 8.4 Comparing Masses in Grams

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.

Topic: 8.5 Real-World Problems: Masses

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.

Unit: Unit 9 Volume

Timeline: Week 30 to 31

Unit

Description: Getting to know volume and its metric unit of measure.

Unit Essential Questions: What does it mean to analyze numerical quantities?

When is it appropriate to estimate versus calculate?

What makes a tool and/or strategy appropriate for a given task?

Why does "what" we measure influence "how" we measure?

In what ways are the mathematical attributes of objects or processes measured, calculated and/or interpreted?

How precise do measurements and calculations need to be?

Unit Big Ideas: Numerical quantities, calculations, and measurements can be estimated or analyzed by using appropriate strategies and tools.

Measurement attributes can be quantified, and estimated using customary and noncustomary units of measure.

Unit Materials: Math In Focus Teacher Manual A
Math In Focus Student Workbook A

random items of different sizes.

Unit Chapter 9 Pretest

Assignments: Math In Focus Student Workbook pg. 217-236
Chapter 9 Assessment

Unit Key Terminology & Definitions: volume
more than
less than
as much as
most
least
liter
measuring cup

STANDARDS: STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.

(* standards consolidated from Topic level)

Topic: 9.1 Getting to Know Volume

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

Topic: 9.2 Measuring in Liters

Minutes for Topic: 120

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

Topic: 9.3 Real-World Problems: Volume

Minutes for Topic: 60

STANDARDS

STATE: PA Core Standards (2014)

[CC.2.4.2.A.1 \(Advanced\)](#) Measure and estimate lengths in standard units using appropriate tools.

[CC.2.4.2.A.6 \(Advanced\)](#) Extend the concepts of addition and subtraction to problems involving length.