Benchmark Alignment and Adjustments
Investigations in Number, Data, & Space
Grade Three

The Benchmark Alignment and Adjustment page correlates the trimester benchmarks to the instructional programs for Investigations in Number, Data, and Space and identifies the Units that provide lessons to address the concepts and skills within Trimester One. Benchmarks that are highlighted will need additional instruction to insure students have developed the concepts and skills needed to insure success. Strategies for additional instruction and content support can be found in the Instructional Support Strategies/Resources section of the booklet.

Trimester One (Weeks 1 – 12)	
1.3.6	Round numbers to nearest tens and hundreds to determine reasonableness of answers [1.16]
1.3.3	Use ordinal positions first through hundredth [1.9]
1.3.4	Identify odd and even numbers [1.10]
1.3.6	Use a variety of appropriate strategies, including mental computation, to estimate, compute, and solve mathematical and practical problems [1.17]
1.3.1	Identify the value of a given digit in the 1's, 10's, 100's, and 1,000's place [1.2]
1.3.4	Model and explain multiplication and division as repeated addition or subtraction [1.12]
1.3.4	Model and explain multiplication and division as skip counting patterns [1.11]
1.3.5	Immediately recall and use addition and subtraction facts [1.13]
1.3.6	Estimate the number of objects in a set using various techniques [1.18]
2.3.1	Describe and label with letters, words, and numbers the patterns observed in models of repeating and increasing patterns [2.4]
2.3.1	Recognize, describe, and create repeating and increasing patterns using numbers [2.1]
2.3.1	Use patterns and their extensions to solve problems
2.3.1	Recognize, describe, and create patterns using objects and numbers found in tables, number charts, and charts [2.2]
2.3.1	Record results of patterns created using manipulatives, pictures, and numeric representations and describe how they are extended [2.3]
2.3.2	Use variables and open sentences to express relationships [2.6]
2.3.2	Model, explain, and solve open number sentences involving addition, subtraction, and multiplication facts [2.5]
2.3.3	Complete number sentences with the appropriate words and symbols (+, -, <, >, =) [2.7]
3.3.1	Compare, order, and describe objects by various measurable attributes for area and volume/capacity [3.3]
3.3.4	Determine possible combinations of coins and bills to equal given monetary amounts [3.9]
3.3.6	Recognize that there are 60 minutes in 1 hour [3.14]
3.3.6	Tell time to the nearest minute, using analog and digital clocks [3.12]
4.3.3	Identify lines of symmetry [4.4]
4.3.3	Create two-dimensional designs that contain a line of symmetry [4.5]
A.3-5	Select, modify, develop, apply, and justify strategies to solve a variety of mathematical and practical problems and to investigate and understand mathematical concepts [A.1]
A.3-5	Apply previous experience and knowledge to new problem-solving situations [A.2]
A.3-5	Determine an efficient strategy, verify, interpret, and evaluate results with respect to the original problem [A.3]
A.3-5	Try more than one strategy when the first strategy proves to be unproductive [A.4]
A.3-5	Apply multi-step, integrated, mathematical problem-solving strategies, persisting until a solution is found or until it is clear that no solution exists [A.5]
A.3-5	Generalize solutions and strategies to new problem situations [A.6]
A.3-5	Interpret and solve a variety of mathematical problems by paraphrasing, identifying necessary and extraneous information, and ensuring the answer is reasonable [A.7]
A.3-5	Use technology, including calculators, to investigate and describe relationships such as patterns and functions, to develop mathematical concepts and solve problems [A.8]

Benchmark Alignment and Adjustments
Investigations in Number, Data, & Space
Grade Three

B.3-5	Discuss and exchange ideas about mathematics as part of learning [B.1]
B.3-5	Use inquiry techniques (discussion, questioning, research, and data gathering) to solve mathematical problems [B.2]
B.3-5	Identify and translate key words and phrases that imply mathematical operations [B.3]
B.3-5	Use a variety of methods (physical materials, diagrams, and tables) to represent and communicate mathematical ideas through oral, verbal, and written formats [B.4]
B.3-5	Use everyday language to make conjectures, explain, and justify thinking about strategies and solutions to mathematical problems [B.5]
B.3-5	Express mathematical ideas and use them to define, compare, and solve problems orally and in writing [B.6]
B.3-5	Use mathematical words, phrases, and symbols to communicate and explain mathematical situations [B.7]
B.3-5	Read a variety of fiction and nonfiction texts to learn about mathematics [B.8]
C.3-5	Justify and explain the solutions to problems using manipulatives and physical models [C.1]
C.3-5	Use patterns and relationships to analyze mathematical situations and draw logical conclusions about mathematical problems [C.2]
C.3-5	Follow a logical argument and judge its validity [C.3]
C.3-5	Ask questions to reflect on, clarify, and extend thinking [C.4]
C.3-5	Review and refine the assumptions and steps used to derive conclusions in mathematical arguments [C.5]
C.3-5	Determine relevant, irrelevant, and/or sufficient information to solve mathematical problems [C.6]
D.3-5	Link new concepts to prior knowledge [D.1]
D.3-5	Use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics [D.2]
D.3-5	Use physical models to explain the relationship of concepts to procedures [D.3]
D.3-5	Apply mathematical thinking and modeling to solve problems that arise in other disciplines such as rhythm in music and motion in science [D.4]
D.3-5	Approach problems with flexibility in a variety of ways within and beyond the field of mathematics [D.5]
D.3-5	Identify, explain, and use mathematics in everyday life [D.6]

Unit

Provide instruction, Choice Time and Ten Minute Math from the following Units within the recommended time frame.

Mathematical Thinking at Grade 3 (2 – 3 weeks)

Ten Minute Math (as outlined in the Unit)

- Calendar Math
- Exploring Data

Things That Come in Groups (9 – 10 weeks)

Ten Minute Math (as outlined in the Unit)

- Counting Around the Class
- Likely or Unlikely?

Benchmark Alignment and Adjustments
Investigations in Number, Data, & Space
Grade Three

The Benchmark Alignment and Adjustment page correlates the trimester benchmarks to the instructional programs for Investigations in Number, Data, and Space and identifies the Units that provide lessons to address the concepts and skills within Trimester Two. Benchmarks that are highlighted will need additional instruction to insure students have developed the concepts and skills needed to insure success. Strategies for additional instruction and content support can be found in the Instructional Support Strategies/Resources section of the booklet.

Trimester Two (Weeks 13 – 24)	
1.3.1	Read and write decimals (tenths and hundredths place) [1.3]
1.3.2	Model, sketch, label, and compare fractions with denominators to 10 [1.4]
1.3.5	Recall division facts through the 10's [1.15]
1.3.5	Add and subtract decimals, tenths and hundredths [1.23]
1.3.5	Divide a two-digit number by a one-digit number without a remainder [1.21]
1.3.5	Immediately recall multiplication facts, products to 81 [1.14]
1.3.7	Add and subtract multi-digit numbers with and without regrouping [1.19]
1.3.7	Add and subtract decimals using money as a model [1.22]
1.3.8	Generate and solve two-step addition and subtraction and one-step multiplication problems based on practical situations [1.25]
3.3.1	Estimate and use measuring devices with standard (customary and metric) and non-standard units to measure area, volume, capacity, and weight [3.1]
3.3.1	Read thermometers and compare results [3.2]
3.3.1	Communicate the relationships of more, less, and equivalent when solving measurement problems [3.4]
3.3.2	Select and use appropriate units of measure; measure and record to a required degree of accuracy to the nearest ½ unit [3.5, 3.6]
3.3.4	Read, write, and use money notation [3.10]
4.3.2	Identify a figure after transformation (slides, flips, turns) [4.3]
4.3.1	Describe, sketch, compare, and contrast plane geometric figures [4.1]
4.3.2	Demonstrate and describe the transformational motions of geometric figures (translation/slide, reflection/flip, and rotation/turn) [4.2]
4.3.4	Compare, contrast, sketch, model, and build two- and three-dimensional geometric figures and objects [4.6]
4.3.6	Identify, draw, and describe horizontal, vertical, and oblique lines [4.7]
4.3.9	Use quantifiers all, some, and none to describe characteristics of a set [4.8]
5.3.3	Draw conclusions from charts, tables, and graphs to solve problems [5.3]
5.3.1	Pose questions that can be used to guide data collection, organization, and representation [5.1]
A.3-5	Select, modify, develop, apply, and justify strategies to solve a variety of mathematical and practical problems and to investigate and understand mathematical concepts [A.1]
A.3-5	Apply previous experience and knowledge to new problem-solving situations [A.2]
A.3-5	Determine an efficient strategy, verify, interpret, and evaluate results with respect to the original problem [A.3]
A.3-5	Try more than one strategy when the first strategy proves to be unproductive [A.4]
A.3-5	Apply multi-step, integrated, mathematical problem-solving strategies, persisting until a solution is found or until it is clear that no solution exists [A.5]
A.3-5	Generalize solutions and strategies to new problem situations [A.6]
A.3-5	Interpret and solve a variety of mathematical problems by paraphrasing, identifying necessary and extraneous information, and ensuring the answer is reasonable [A.7]
A.3-5	Use technology, including calculators, to investigate and describe relationships such as patterns and functions, to develop mathematical concepts and solve problems [A.8]
B.3-5	Discuss and exchange ideas about mathematics as part of learning [B.1]
B.3-5	Use inquiry techniques (discussion, questioning, research, and data gathering) to solve mathematical problems [B.2]
B.3-5	Identify and translate key words and phrases that imply mathematical operations [B.3]

Benchmark Alignment and Adjustments
Investigations in Number, Data, & Space
Grade Three

B.3-5	Use a variety of methods (physical materials, diagrams, and tables) to represent and communicate mathematical ideas through oral, verbal, and written formats [B.4]
B.3-5	Use everyday language to make conjectures, explain, and justify thinking about strategies and solutions to mathematical problems [B.5]
B.3-5	Express mathematical ideas and use them to define, compare, and solve problems orally and in writing [B.6]
B.3-5	Use mathematical words, phrases, and symbols to communicate and explain mathematical situations [B.7]
B.3-5	Read a variety of fiction and nonfiction texts to learn about mathematics [B.8]
C.3-5	Justify and explain the solutions to problems using manipulatives and physical models [C.1]
C.3-5	Use patterns and relationships to analyze mathematical situations and draw logical conclusions about mathematical problems [C.2]
C.3-5	Follow a logical argument and judge its validity [C.3]
C.3-5	Ask questions to reflect on, clarify, and extend thinking [C.4]
C.3-5	Review and refine the assumptions and steps used to derive conclusions in mathematical arguments [C.5]
C.3-5	Determine relevant, irrelevant, and/or sufficient information to solve mathematical problems [C.6]
D.3-5	Link new concepts to prior knowledge [D.1]
D.3-5	Use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics [D.2]
D.3-5	Use physical models to explain the relationship of concepts to procedures [D.3]
D.3-5	Apply mathematical thinking and modeling to solve problems that arise in other disciplines such as rhythm in music and motion in science [D.4]
D.3-5	Approach problems with flexibility in a variety of ways within and beyond the field of mathematics [D.5]
D.3-5	Identify, explain, and use mathematics in everyday life [D.6]

Unit

Provide instruction, Choice Time and Ten Minute Math from the following Units within the recommended time frame.

Combining and Comparing (5 weeks)

Ten Minute Math (as outlined in the Unit)

- Exploring Data
- Estimation and Number Sense

Exploring Solids and Boxes (4 weeks)

Ten Minute Math (as outlined in the Unit)

- Quick Images
- What Is Likely?

Flips, Turns, Area (3 weeks)

Ten Minute Math (as outlined in the Unit)

- Broken Calculator

Benchmark Alignment and Adjustments
Investigations in Number, Data, & Space
Grade Three

The Benchmark Alignment and Adjustment page correlates the trimester benchmarks to the instructional programs for Investigations in Number, Data, and Space and identifies the Units that provide lessons to address the concepts and skills within Trimester Three. Benchmarks that are highlighted will need additional instruction to insure students have developed the concepts and skills needed to insure success. Strategies for additional instruction and content support can be found in the Instructional Support Strategies/Resources section of the booklet.

Trimester Three (Weeks 25 – 36)	
1.3.5	Multiply a two- or three-digit number by a multiple of 10 [1.20]
1.3.1	Identify, use, and model place value positions of 1's, 10's, 100's and 1,000's [1.1]
1.3.2	Identify and model unit fractions 1/2, 1/3,1/4, 1/6, and 1/8 as equal parts of a whole or sets of objects [1.5]
1.3.2	Read and write unit fractions with numbers and words [1.6]
1.3.3	Read, write, compare, and order numbers 0 - 9,999 [1.7]
1.3.3	Read and write number words 0 to 81 [1.8]
1.3.8	Use mathematical vocabulary and symbols to describe multiplication and division [1.26]
1.3.8	Model addition, subtraction, multiplication, and division in a variety of ways [1.24]
3.3.3	Identify perimeter and area of regular and irregular figures by counting units [3.7]
3.3.3	Identify dimensions and volume of rectangular prisms by counting cubes [3.8]
3.3.4	Recognize equivalent relationships between and among bills and coins [3.11]
3.3.6	Use elapsed time in half-hour increments, beginning on the hour or half-hour, to determine start, end, and elapsed times [3.13]
5.3.5	Conduct simple probability experiments using spinners, number cubes, and random drawings [5.5]
5.3.1	Use graphical representations, including number lines, frequency tables, and pictographs to represent data [5.2]
5.3.5	Use informal concepts of probability such as impossible, unlikely, likely, and certain to make predictions about future events [5.4]
A.3-5	Select, modify, develop, apply, and justify strategies to solve a variety of mathematical and practical problems and to investigate and understand mathematical concepts [A.1]
A.3-5	Apply previous experience and knowledge to new problem-solving situations [A.2]
A.3-5	Determine an efficient strategy, verify, interpret, and evaluate results with respect to the original problem [A.3]
A.3-5	Try more than one strategy when the first strategy proves to be unproductive [A.4]
A.3-5	Apply multi-step, integrated, mathematical problem-solving strategies, persisting until a solution is found or until it is clear that no solution exists [A.5]
A.3-5	Generalize solutions and strategies to new problem situations [A.6]
A.3-5	Interpret and solve a variety of mathematical problems by paraphrasing, identifying necessary and extraneous information, and ensuring the answer is reasonable [A.7]
A.3-5	Use technology, including calculators, to investigate and describe relationships such as patterns and functions, to develop mathematical concepts and solve problems [A.8]
B.3-5	Discuss and exchange ideas about mathematics as part of learning [B.1]
B.3-5	Use inquiry techniques (discussion, questioning, research, and data gathering) to solve mathematical problems [B.2]
B.3-5	Identify and translate key words and phrases that imply mathematical operations [B.3]
B.3-5	Use a variety of methods (physical materials, diagrams, and tables) to represent and communicate mathematical ideas through oral, verbal, and written formats [B.4]
B.3-5	Use everyday language to make conjectures, explain, and justify thinking about strategies and solutions to mathematical problems [B.5]
B.3-5	Express mathematical ideas and use them to define, compare, and solve problems orally and in writing [B.6]
B.3-5	Use mathematical words, phrases, and symbols to communicate and explain mathematical situations [B.7]
B.3-5	Read a variety of fiction and nonfiction texts to learn about mathematics [B.8]

Benchmark Alignment and Adjustments
Investigations in Number, Data, & Space
Grade Three

C.3-5	Justify and explain the solutions to problems using manipulatives and physical models [C.1]
C.3-5	Use patterns and relationships to analyze mathematical situations and draw logical conclusions about mathematical problems [C.2]
C.3-5	Follow a logical argument and judge its validity [C.3]
C.3-5	Ask questions to reflect on, clarify, and extend thinking [C.4]
C.3-5	Review and refine the assumptions and steps used to derive conclusions in mathematical arguments [C.5]
C.3-5	Determine relevant, irrelevant, and/or sufficient information to solve mathematical problems [C.6]
D.3-5	Link new concepts to prior knowledge [D.1]
D.3-5	Use mathematical ideas from one area of mathematics to explain an idea from another area of mathematics [D.2]
D.3-5	Use physical models to explain the relationship of concepts to procedures [D.3]
D.3-5	Apply mathematical thinking and modeling to solve problems that arise in other disciplines such as rhythm in music and motion in science [D.4]
D.3-5	Approach problems with flexibility in a variety of ways within and beyond the field of mathematics [D.5]
D.3-5	Identify, explain, and use mathematics in everyday life [D.6]

Unit

Provide instruction, Choice Time and Ten Minute Math from the following Units within the recommended time frame.

Fair Shares (5 weeks)

Ten Minute Math (as outlined in the Unit)

- Guess My Number
- Broken Calculator

Landmarks in the Hundreds (6 weeks)

Ten Minute Math (as outlined in the Unit)

- Counting Around the Class
- Calculator Math