



Essential Standards Extended Guide

Grade 2 Mathematics

GUIDING INFORMATION

In response to requests from schools and districts for guidance on essential standards, committees of educators from around Idaho collaborated in the summer of 2024 to categorize mathematics standards into four groups:

- **Essential standards** are explicitly taught, assessed multiple times, and receive targeted interventions for students who have not yet reached proficiency.
- **Supporting standards** are taught to reinforce essential standards and may or may not be formally assessed.
- **Additional standards** extend learning and are incorporated as time allows within course units, with assessment being optional.
- **Mathematical Big Ideas** are overarching mathematical concepts that are central to the learning of mathematics and link numerous mathematical understandings into a coherent whole. They are difficult to assess.

This guidance helps LEAs prioritize the most critical standards, recognizing that not all standards are of equal importance. This document serves as a resource—not a mandate—to assist local efforts. Importantly, this work did not remove or revise any of the adopted Idaho Content Standards and is intended to refocus time and effort.

The 2022 Idaho Content Standards for Mathematics list the standards for each grade level by domain and provide clarification statements and examples of individual standards. This *Essential Standards Extended Guide* provides examples of how teachers can group standards for mathematics instruction. Appendix A provides planning templates for using these instructional groupings to plan instructional calendars and units.

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Instructional Grouping 1: Addition and Subtraction within 100

Mathematical Big Ideas:

- 2.OA.A. Represent and solve problems involving addition and subtraction.
- 2.OA.B. Add and subtract within 20.

Essential Standards
Standards to be explicitly taught, assessed more than once, and intervened upon.
<i>Teacher Note: Students use a progression of physical, visual, and symbolic representations to explain their reasoning strategies. Relate students' physical and visual representations to verbalized and written equations.</i>
2.OA.A.1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, by using physical, visual, and symbolic representations.
2.OA.B.2. Demonstrate fluency for addition and subtraction within 20 using mental strategies. By the end of grade two, recall basic facts to add and subtract within 20 with automaticity.
<i>Teacher Note: This standard can be integrated into other instructional groupings and into other content areas to help students see and represent their world in mathematical ways.</i>
2.MD.D.10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in the graph.

Supporting Standards
Standards that support the learning of essential standards and may or may not be formally assessed.
2.OA.C.4. Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and up to 5 columns; write an equation to express the total as a sum of equal addends.
2.NBT.A.1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.
2.NBT.A.1a. Understand 100 can be thought of as a bundle of ten tens—called a “hundred.”
2.NBT.A.2. Count within 1,000; skip-count by fives, tens, and 100s. Identify patterns in skip counting starting at any number.
2.NBT.B.5. Fluently add and subtract whole numbers within 100 using understanding of place value and properties of operations.
2.NBT.B.7b. Understand that sometimes it is necessary to compose or decompose tens or hundreds.
2.MD.B.5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units.
2.MD.C.8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies (up to \$10), using \$ and ¢ symbols appropriately and whole-dollar amounts.

Additional Standards

Standards that deepen learning and may be included as time allows throughout course units of study and may or may not be assessed.

2.MD.C.7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

Teacher note: use word problems with time in mathematics to integrate learning this functional life skill into mathematics contexts.

Instructional Grouping 2: Measurement of Length

Mathematical Big Ideas:

- 2.MD.A. Measure and estimate lengths in standard units.
- 2.MD.B. Relate addition and subtraction to length.

Essential Standards
Standards to be explicitly taught, assessed more than once, and intervened upon.
<i>Teacher note: These standards build conceptual understandings of number lines, which is an important representational tool for addition and subtraction operations. Integrating measuring length into Instructional Grouping 1, 2 and 3 will help build both conceptual understanding and spatial visualization of addition and subtraction.</i>
2.MD.A.1. Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.
2.MD.B.6. Represent whole numbers as lengths from zero on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.
<i>Teacher Note: This standard can be integrated into other instructional groupings and into other content areas to help students see and represent their world in mathematical ways.</i>
2.MD.D.10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in the graph.

Supporting Standards
Standards that support the learning of essential standards and may or may not be formally assessed.
2.NBT.B.5. Fluently add and subtract whole numbers within 100 using understanding of place value and properties of operations.
2.MD.A.2. Measure the length of an object twice, using length units of different lengths for the two measurements; describe how the two measurements relate to the size of the unit chosen.
2.MD.A.3. Estimate lengths using units of inches, feet, centimeters, and meters.
2.MD.A.4. Measure to determine how much longer one object is than another, expressing the length difference in terms of a standard length unit.
2.MD.D.9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Organize and record data on a line plot (dot plot) where the horizontal scale is marked off in whole-number units.

Instructional Grouping 3: Addition and Subtraction with Two-digit Numbers

Mathematical Big Ideas:

- 2.NBT.A. Understand place value.
- 2.NBT.B. Use place value understanding and properties of operations to add and subtract.

Essential Standards Standards to be explicitly taught, assessed more than once, and intervened upon.
2.NBT.B.6. Add up to four two-digit numbers using strategies based on place value and properties of operations.
2.MD.D.10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in the graph.

Supporting Standards Standards that support the learning of essential standards and may or may not be formally assessed.
2.OA.C.3. Determine whether a group of objects (up to 20) has an odd or even number of members and write an equation to express an even number as a sum of two equal addends.
2.NBT.A.1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.
2.NBT.A.1a. 100 can be thought of as a bundle of ten tens—called a “hundred.”
2.NBT.A.2. Count within 1,000; skip-count by fives, tens, and 100s. Identify patterns in skip counting starting at any number.
2.NBT.A.3. Read and write numbers from 0 to 1,000 using standard form, expanded form, and word form.
2.NBT.B.5. Fluently add and subtract whole numbers within 100 using understanding of place value and properties of operations.
2.NBT.B.7b. Understand that sometimes it is necessary to compose or decompose tens or hundreds.
2.NBT.B.9. Explain why addition and subtraction strategies work, using place value and the properties of operations.
2.MD.C.8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies (up to \$10), using \$ and ¢ symbols appropriately and whole-dollar amounts.

Additional Standards

Standards that deepen learning and may be included as time allows throughout course units of study and may or may not be assessed.

Teacher note: use word problems with time in mathematics to integrate learning this functional life skill into mathematics contexts.

2.MD.C.7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

Instructional Grouping 4: Addition and Subtraction with Three-digit Numbers

Mathematical Big Ideas:

- **2.NBT.B. Use place value understanding and properties of operations to add and subtract.**

Essential Standards
Standards to be explicitly taught, assessed more than once, and intervened upon.
2.NBT.A.4. Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, recording the results of comparisons with the symbols $>$, $=$, and $<$.
2.NBT.B.7. Add and subtract whole numbers within 1,000, by using physical, visual, and symbolic representations, with an emphasis on place value, properties of operations, and/or the relationships between addition and subtraction.
2.NBT.B.8. Use mental strategies to add or subtract a number that is ten more, ten less, one hundred more, and one hundred less than a given three-digit number.
<i>Teacher Note: This standard can be integrated into other instructional groupings and into other content areas to help students see and represent their world in mathematical ways.</i>
2.MD.D.10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in the graph.

Supporting Standards
Standards that support the learning of essential standards and may or may not be formally assessed.
2.OA.C.3. Determine whether a group of objects (up to 20) has an odd or even number of members and write an equation to express an even number as a sum of two equal addends.
2.NBT.A.1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.
2.NBT.A.1b. Understand: 100 can be thought of as a bundle of ten tens—called a “hundred.”
2.NBT.A.1b. Understand: the numbers 100, 200, 300, 400, 500, 600, 700, 800, and 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).
2.NBT.A.2. Count within 1,000; skip-count by fives, tens, and 100s. Identify patterns in skip counting starting at any number.
2.NBT.A.3. Read and write numbers from 0 to 1,000 using standard form, expanded form, and word form.
2.NBT.B.5. Fluently add and subtract whole numbers within 100 using understanding of place value and properties of operations.
2.NBT.B.5a. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones.

Supporting Standards

Standards that support the learning of essential standards and may or may not be formally assessed.

2.NBT.B.7b. Understand that sometimes it is necessary to compose or decompose tens or hundreds.

2.NBT.B.9. Explain why addition and subtraction strategies work, using place value and the properties of operations.

2.MD.C.8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies (up to \$10), using \$ and ¢ symbols appropriately and whole-dollar amounts.

Additional Standards

Standards that deepen learning and may be included as time allows throughout course units of study and may or may not be assessed.

2.MD.C.7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

Teacher note: use word problems with time in mathematics to integrate learning this functional life skill into mathematics contexts.

Instructional Grouping 5: Partitioning with Number Lines and Shapes

Mathematical Big Ideas:

- ○ **2.G.A. Reason with shapes and their attributes.**

Essential Standards

Standards to be explicitly taught, assessed more than once, and intervened upon.

Teacher Note: Partitioning shapes builds conceptual understandings that are transferred to multiplication, division and fractions.

2.G.A.2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.

Supporting Standards

Standards that support the learning of essential standards and may or may not be formally assessed.

2.G.A.1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, squares, rectangles, rhombi, trapezoids, pentagons, hexagons, octagons, and cubes.

2.G.A.3. Partition circles and rectangles into two, three, or four equal shares. Understand for these examples that decomposing into more equal shares creates smaller shares.

2.G.A.3a. Describe the shares using the words “halves,” “thirds,” “fourths,” and “quarter,” and use the phrases “half of,” “a third of,” “a fourth of,” and “quarter of.”

2.G.A.3b. Describe the whole as two of, three of, or four of the shares.

2.G.A.3c. Recognize that equal shares of identical wholes need not have the same shape.

Appendix A: Planning Templates

Instructional Calendar Template

Use this template to sequence your instructional units onto a Year At-A-Glance calendar. This template can be adapted to show semesters or trimesters.

Month	Instructional Grouping
August	
September	
October	
November	
December	
January	
February	
March	
April	
May	

Unit Planning Template

Use this template to plan and collaborate around an instructional grouping. This template facilitates identifying curricular and assessment resources to teach and assess the content in one instructional grouping.

Instructional Grouping #:	Unit Topic:
Time Allotment: <i>How many instructional days do you plan to spend on this topic?</i>	
Learning Activities: <i>What common lessons will we teach from our curricular resources?</i>	
Common Assessments: <i>What common assessments will we give?</i> <i>Consider IAB and FIAB assessments in the ISAT portal if appropriate and common teacher created assessments.</i>	
Team Collaboration Notes: <i>What did we learn about teaching this topic from analyzing our student work samples?</i> <i>What intervention do we need to do on essential standards? Who is ready for learning additional standards?</i>	