Guidance Document - *GO Math!* Grade 1

Part Four: Chapter-Level Guidance for *GO Math!* (Grade 1)

How can teachers implement each chapter of Grade 1 to make instruction more aligned by making minor modifications and supplementing Open Educational Resources (OER)?

Grade 1 / Chapter 1: Addition Concepts			
Lesson	**Action**	**Details for the Action**	**Rationale**
1.1 Use Pictures to Add To 1.2 Model Adding To	Modify	Condense these lessons so there can be more of a focus on moving more quickly toward the work that is new in first grade.	Aligns to 1.OA.A.2 but the numbers and problem types reflect work that students should have also done in Kindergarten (K.OA.A.2).
1.3 Model Putting Together	As is		
1.4 Model Addition	As is		
1.5 Add Zero	Delete		There is not a separate standard for adding zero. It should be part of the work of 1.OA.C.6 and integrated across the chapter so that it doesn't appear as a separate topic from addition. (See Chapter Rule of Thumb.)
1.6 Add in Any Order	As is		
1.7 Put Together Numbers to 10	As is		
1.8 Addition to 10	As is		

Chapter 1 Rules of Thumb	Rationale
Use bar models and/or number bonds first as a way to illustrate the concept of part-part-whole, and then as a support for students who require it as part of normal classroom differentiation strategies. That is, gradually let students take ownership of the representations they choose to use for solving problems.	The Standards do not require students to be able to use these representations specifically. To be aligned to the standards in the OA domain, students should be encouraged to develop the representation(s) that help them achieve the central concern of the standard(s) instead of being given a particular representation.
Where directions to students provide excessive scaffolding, present problems without the directions. (See, for example, Chapter 1, Lesson 2: “On Your Own.”)	1.OA.A.1 requires students to solve problems and the scaffolding undermines the potential for students to meet the standard.
Integrate problems from deleted Lesson 1.5 with other problems students are working on in Lessons 1.6-1.8.	There is not a separate standard for adding zero. It is part of the work of 1.OA.C.6 and should be integrated across the chapter instead of appearing as a separate topic for students to learn.

Grade 1 / Chapter 2: Subtraction Concepts			
Lesson	**Action**	**Details for the Action**	**Rationale**
2.1 Use Pictures to Show Taking From 2.2 Model Taking From	Modify	Condense these lessons so there can be more of a focus on moving more quickly toward the work that is new in Grade 1.	Aligns to 1.OA.A.2 but the numbers and problem types reflect work that students should have also done in Kindergarten (K.OA.A.2)
2.3 Model Taking Apart	As is		
2.4 Model Subtraction	As is		
2.5 Use Pictures and Subtraction to Compare	As is		
2.6 Subtract to Compare	As is		
2.7 Subtract All or Zero	As is		
2.8 Take Apart Numbers	As is		
2.9 Subtraction from 10 or Less	As is		

 **Chapter 2 Rules of Thumb**	**Rationale**

Use bar models and/or number bonds first as a way to illustrate the concept of part-part-whole, and then as a support for students who require it as part of normal classroom differentiation strategies. That is, gradually let students take ownership of the representations they choose to use for solving problems.	The Standards do not require students to be able to use these representations specifically. To be aligned to the standards in the OA domain, students should be encouraged to develop the representation(s) that help them achieve the central concern of the standard(s) instead of being given a particular representation.
Where directions to students provide excessive scaffolding, present problems without the directions. (See for example, Chapter 2, Lesson 2, “On Your Own.”)	The scaffolding undermines the goal of 1.OA.A.1.

Grade 1 / Chapter 3: Addition Strategies			
Lesson	**Action**	**Details for the Action**	**Rationale**
3.1 Add in Any Order	Delete	Move to after Lesson 3.9.	1.OA.B.3 requires students to apply properties of operations as strategies to add and subtract. The commutative property is only a strategy for this purpose if students have some experience adding within 20 already.
3.2 Count On	As is		
3.3 Add Doubles	Delete		1.OA.C.6 lists “creating equivalent but easier or known sums” as one possible strategy. Since doubles facts are not developed to fluency, the expectation that these are “known” by all students is not met. This content will be addressed in Grade 2, Chapter 3. (2.OA.B.2)
3.4 Use Doubles to Add	Delete		1.OA.C.6 lists “creating equivalent but easier or known sums” as one possible strategy. Since doubles facts are not developed to fluency, the expectation that these are “known” by all students is not met. This content will be addressed in Grade 2, Chapter 3. (2.OA.B.2)
3.5 Doubles Plus 1 and Doubles Minus 1	Delete		1.OA.C.6 lists “creating equivalent but easier or known sums” as one possible strategy. Since doubles facts are not developed to fluency, the expectation that these are “known” by all students is not met. This content will be addressed in Grade 2, Chapter 3. (2.OA.B.2)
3.6 Practice the Strategies	As is		
3.7 Add 10 and More	As is		
3.8 Make a 10 to Add	Modify	Suggested pacing is 1 day. Extend this lesson over 2 days.	Making 10 is a high leverage strategy in Grade 1 (1.OA.C.6).

3.9 Use Make a 10 to Add	As is		
3.9.1	Add	Use Lesson 3.1	Students need more work on the central concern of 1.OA.C.6, allowing them to add two numbers without using a specific strategy
3.9.2	Add	Practice for students to use any strategy to add within 20: EngageNY, Module 2, Lesson 10	Students need more work on the central concern of 1.OA.C.6, allowing them to add two numbers without using a specific strategy.
3.10 Add 3 Numbers	As is		
3.11 Add 3 Numbers	As is		
3.12 Use Addition Strategies	As is		

Chapter 3 Rule of Thumb	**Rationale**
Use the ten frame first as a way to illustrate the strategy of making 10 conceptually and then as a support for students who require it. That is, gradually let students take ownership of the representations they choose to use for solving problems.	Domain 1.OA does not require students to be able to use a 10 frame. Consistent with the MP.5 language, students should “make sound decisions” about the tools that they use rather than always being shown which tools to use.

Grade 1 / Chapter 4: Subtraction Strategies

Lesson	Action	Details for the Action	Rationale
4.1 Count Back	As is		
4.1.1	Add	Lesson about “counting on” as a strategy to subtract: EngageNY, Module 1, Lesson 26	1.OA.C.5 requires students to relate counting to addition and subtraction (e.g., by counting on 2 to add 2). “Unlike counting down, counting on reinforces subtraction as an unknown addend problem” (CC/OA Progression, p. 15).
4.2 Think Addition to Subtract	As is		
4.3 Use Think Addition to Subtract	As is		
4.4 Use 10 to Subtract	As is		
4.5 Break Apart to Subtract	As is		
4.6 Use Subtraction Strategies	As is		

Chapter Rule of Thumb	Rationale
Use the ten frame first as a way to illustrate the strategy of making 10 conceptually and then as a support for students who require it as part of normal classroom differentiation strategies. That is, gradually let students take ownership of the representations they choose to use for solving problems.	Domain 1.OA does not require students to be able to use a 10 frame. Consistent with the MP.5 language, students should “make sound decisions” about the tools that they use rather than always being shown which tools to use.

Grade 1 / Chapter 5: Addition and Subtraction Relationships

Lesson	Action	Details for the Action	Rationale
5.1 Add or Subtract	As is		
5.2 Record Related Facts	As is		
5.3 Identify Related Facts	As is		
5.4 Use Addition to Check Subtraction	As is		
5.5 Unknown Numbers	As is		
5.6 Use Related Facts	As is		
5.7 Choose an Operation	As is		
5.7.1	Add	Practice for students to solve the variety of problem types for addition & subtraction within 20. Resources: ● Illustrative Mathematics, Maria's Marbles ● Illustrative Mathematics, Sharing Markers ● Illustrative Mathematics, Boys and Girls, Variation 1 ● Illustrative Mathematics, Field Day Scarcity	More work is needed for students to independently solve problems that meet the variety of problem types required by 1.OA.A.1. See Table 1: Addition and subtraction situations (CC/OA Progression, p. 7).
5.8 Ways to Make Numbers to 20	Modify	"Chapter at a Glance" in some editions notes this lesson as 1-2 days. Spend 2 days on this lesson.	OA Domain -- This is a strong integration of the body of work required by the OA domain which is Major Work in Grade 1.
5.9 Equal and Not Equal	Modify	"Chapter at a Glance" in some editions notes this lesson as 1-2 days. Spend 2 days on this lesson.	1.OA.D.7 requires students to understand the equal sign. This is the only lesson where students see multiple terms on both sides of the equation, an important part of

			achieving the verb “understand” used in the language of the standard.
5.10 Facts Practice to 20	As is		
5.10.1	Add	Practice for students to solve the variety of problem types for addition & subtraction within 20. Resources: ● Illustrative Mathematics, At the Park ● Illustrative Mathematics, The Pet Snake ● Illustrative Mathematics, Link-Cube Addition ● Illustrative Mathematics, School Supplies	More work is needed for students to independently solve problems that meet the variety of problem types required by 1.OA.A.1. See Table 1: Addition and subtraction situations (CC/OA Progression, p. 7).

Chapter 5 Rule of Thumb	**Rationale**
Use bar models and/or number bonds first as a way to illustrate the concept of part-part-whole and then as a support for students who require it as part of normal classroom differentiation strategies. That is, gradually let students take ownership of the representations they choose to use for solving problems.	The Standards do not require students to be able to use these representations specifically. To be aligned to the standards in the OA domain, students should be encouraged to develop the representation(s) that help them achieve the central concern of the standard(s) instead of being given a particular representation.

Grade 1 / Chapter 6: Count and Model Numbers			
Lesson	**Action**	**Details for the Action**	**Rationale**
6.1 Count by Ones to 120	As is		
6.2 Count by Tens to 120	As is		
6.3 Understand Tens and Ones	Delete		This lesson repeats the work of Lesson 3.7.
6.4 Make Tens and Ones	As is		
6.5 Tens	As is		
6.6 Tens and Ones to 50	As is		
6.7 Tens and Ones to 100	As is		
6.8 Show Numbers in Different Ways	As is		
6.8.1	Add	Choose 5-6 problems from each lesson's *Practice Set* as additional practice on the concepts addressed in Lesson 6.8: ● Engage NY, Module 4, Lesson 3 ● Engage NY, Module 4, Lesson 4	1.NBT.B.2a and 1.NBT.B.3 are Major Work of Grade 1 and warrant more than a single lesson (6.8).
6.8.2	Add	Choose 5-6 problems from each lesson's *Practice Set* as additional practice on the concepts addressed in Lesson 6.8. ● Engage NY, Module 4, Lesson 5 ● Engage NY, Module 4, Lesson 6	1.NBT.B.2a and 1.NBT.B.3 are Major Work of Grade 1 and warrant more than a single lesson (6.8).
6.9 Model, Read, and Write Numbers from 100 to 110	As is		

6.10 Model, Read, and Write Numbers from 110 to 120	As is		

Chapter 6 Rule of Thumb	**Rationale**
Apply the global rule of thumb for general approach to vocabulary. In this chapter, emphasize correct meaning and use of key vocabulary: digits, value, place, and place value. **Note:** The concept of **place value** provides us with a way to write numbers in a succinct manner (i.e., instead of writing that I have 3 hundreds and 4 tens and 2 ones, I can write 342). In the number 342, the “3” is a **digit**; it is in the hundreds **place**, and it carries a **value** of 300.	Deleted lesson makes specific reference to the term “digit.” This term should be used consistently and correctly throughout the chapter in the context of teaching and learning within the NBT domain.

Grade 1 / Chapter 7: Compare Numbers			
Lesson	**Action**	**Details for the Action**	**Rationale**
7.1 Greater Than	As is		
7.2 Less Than	As is		
7.3 Use Symbols to Compare	As is		
7.4 Compare Numbers	Modify	Extend this lesson over 2 days. Additional resources: ● Illustrative Mathematics, Roll & Build ● Illustrative Mathematics, The Very Hungry Caterpillar	1.NBT.B.2 is Major Work of the grade and this lesson supports the important verb “understand” found in cluster 1.NBT.B.
7.5 10 Less, 10 More	As is		

Chapter 7 Rules of Thumb	**Rationale**
Where not explicitly called for in the lesson (e.g., Lesson 7.4), use classroom discussion and student work to explicitly connect comparisons to the meanings of the tens and ones.	1.NBT.B.3 requires that comparisons be based on the meanings of the digits.
Make explicit connections across representations (e.g., in lessons 7.1-7.3), such as making sure that students connect the tens sticks (flat sticks) and units representation to the written comparison statement.	1.NBT.B requires students to understand place value.

Grade 1 / Chapter 8: Two-Digit Addition and Subtraction			
Lesson	**Action**	**Details for the Action**	**Rationale**
8.1 Add and Subtract Within 20	Delete		Students already did this work in chapters 3-5. It is confusing to call it a “lesson,” but can be used for practice.
8.2 Add Tens 8.3 Subtract Tens	Modify	Condense these lessons so there can be more of a focus on moving more quickly toward the work that is new in first grade.	Emphasize the “relationship between addition and subtraction” by presenting them as connected topics (1.NBT.C.6).
8.4 Use a Hundred Chart to Add	As is		
8.5 Use Models to Add	As is		
8.6 Make Ten to Add	Modify	Extend this lesson to 2 days. Additional Resource: Illustrative Mathematics, Ford and Logan	This is Major Work of the grade and the first time students have to compose ones to make a ten (1.NBT.C.4).
8.7 Use Place Value to Add	As is		
8.8 Addition Word Problems	As is		
8.9 Related Addition and Subtraction	As is		
8.10 Practice Addition and Subtraction	As is		

Chapter 8 Rule of Thumb	Rationale
There are no chapter-specific Rules of Thumb. Be sure to still apply grade- and program-level Rules of Thumb from Part Two and Part Three of this document.	

Grade 1 / Chapter 9: Measurement			
Lesson	**Action**	**Details for the Action**	**Rationale**
9.1 Order Length	As is		
9.2 Indirect Measurement	As is		
9.3 Use Nonstandard Units to Measure Length	As is		
9.4 Make a Nonstandard Measuring Tool	As is		
9.5 Measure and Compare	As is		
9.6 Time to the Hour	As is		
9.7 Time to the Half Hour	As is		
9.8 Tell Time to the Hour and Half Hour	As is		
9.9 Practice Time to the Hour and Half Hour	As is		

 **Chapter 9 Rule of Thumb**	**Rationale**
There are no chapter-specific Rules of Thumb. Be sure to still apply grade- and program-level Rules of Thumb from Part Two and Part Three of this document.	

Grade 1 / Chapter 10: Represent Data			
Lesson	**Action**	**Details for the Action**	**Rationale**
10.1 Read Picture Graphs	As is		
10.2 Make Picture Graphs	As is		
10.3 Read Bar Graphs	As is		
10.4 Make Bar Graphs	As is		
10.5 Read Tally Charts	As is		
10.6 Make Tally Charts	As is		
10.7 Represent Data	As is		

 **Chapter 10 Rule of Thumb**	**Rationale**
There are no chapter-specific Rules of Thumb. Be sure to still apply grade- and program-level Rules of Thumb from Part Two and Part Three of this document.	

Grade 1 / Chapter 11: Three-Dimensional Geometry			
Lesson	**Action**	**Details for the Action**	**Rationale**
11.1 Three-Dimensional Shapes	As is		
11.2 Combine Three-Dimensional Shapes	As is		
11.3 Make New Three-Dimensional Shapes	As is		
11.4 Take Apart Three-Dimensional Shapes	As is		
11.5 Two-Dimensional Shapes on Three-Dimensional Shapes	As is		

 **Chapter 11 Rule of Thumb**	**Rationale**
There are no chapter-specific Rules of Thumb. Be sure to still apply grade- and program-level Rules of Thumb from Part Two and Part Three of this document.	

Grade 1 / Chapter 12: Two-Dimensional Geometry			
Lesson	**Action**	**Details for the Action**	**Rationale**
12.1 Sort Two-Dimensional Shapes	As is		
12.2 Describe Two-Dimensional Shapes	As is		
12.3 Combine Two-Dimensional Shapes	As is		
12.4 Combine More Shapes 12.5 Make New Two-Dimensional Shapes	Modify	Condense these lessons to make more time available for Major Work added content in previous chapters.	Similar content to previous lessons; 1.G.A.2 is not Major Work.
12.6 Find Shapes in Shapes	As is		
12.7 Take Apart Two-Dimensional Shapes	Delete		The standard only calls for composing shapes, not decomposing; 1.G.A.2 is not Major Work.
12.8 Equal or Unequal Parts	As is		
12.9 Halves	As is		
12.10 Fourths	As is		

Chapter 12 Rule of Thumb	Rationale
There are no chapter-specific Rules of Thumb. Be sure to still apply grade- and program-level Rules of Thumb from Part Two and Part Three of this document.	