**Guidance Document - *GO Math!* Grade 1**

This document provides guidance on how teachers can adjust their implementation of *GO Math!* to better meet the requirements of the Common Core State Standards or other College- and Career-Ready (CCR) standards. Guidance is provided at both the program and chapter levels and was developed through a collaboration between districts currently using *GO Math!* and Student Achievement Partners. Student Achievement Partners worked with districts across the country that appreciate the promise and potential of the *GO Math!*(K-5) comprehensive mathematics program from Houghton Mifflin Harcourt and that sought to align *GO Math!* more closely to the expectations of rigorous college- and career-ready standards. Student Achievement Partners worked with Houghton Mifflin Harcourt and teams of teachers from these districts to create guidance documents that leverage the program's strongest elements and, when used alongside *GO Math!*, provide teachers the resources to deliver aligned instruction in order to drive student outcomes.

*Part 1: About Go Math!*

Provides a summary of the program and an overall assessment of its strengths as well as areas that require attention to improve alignment.

*Part 2: Program-Level Rules of Thumb*

Program-level Rules of Thumb (RoT) provide alternate ways to use features that appear across the *Go Math!* program K-5. Some districts may want to begin by just sharing Part 2 with teachers and supporting them in making the RoT a part of their daily instructional practice.

*Part 3: Grade-Level Rules of Thumb*

Grade-level RoT provide grade-specific alternate ways to use features in each grade-level of *GO Math!*. It also includes a reference to the Fluency documents which provide supplemental resources to help students meet the fluency expectations at each grade level. Teachers may want to consult these at the beginning of the school year as they are mapping out their year.

*Part 4: Chapter-Level Guidance*

Chapter-level guidance includes recommendations for each lesson in all chapters for each grade-level K-5. Lessons can be deleted, modified or left as is. Sometimes, additional lessons are needed to fully reach the expectations of the standards; in these cases a link to a free resource is provided. Keep in mind that these lessons are often pulled from comprehensive programs and teachers will need to make decisions about which parts of the lessons to use. Rationale is provided for why each change has been suggested. By studying this rationale teachers can gain a better understanding of the standards and how to use the suggested resources. Teachers may want to consult each chapter-level guidance as part of a PLC before starting to teach the chapter.

Part One: About *GO Math!* (K-5)

*A description of the strengths in alignment and implementation recommendations*

*GO Math!* *K-5*, written to the Common Core State Standards, was first published by Houghton Mifflin Harcourt in 2012. Since its initial publication, a number of updates have been made in addition to the creation of some state-specific versions. For the most part, however, all of these editions and versions have very similar content and the same instructional approaches.

*GO Math!* has created a sequence of chapters and lessons in each grade that allows for the large majority of time to be on the Major Work of the grade. Generally, the content is aligned to the progression that is outlined in College and Career Ready (CCR) standards with little off-grade-level content and little material that unduly interferes with grade-level learning. Students using *GO Math!* will generally get the right content for the grade level, as outlined by the Standards.

Many lessons that focus on operations provide a mix of strategies and models to help students make sense of the work; however, these strategies and models are rarely connected to each other or used to advance student understanding towards later work they will be doing. For instance, work with addition and subtraction in 1st and 2nd grades includes a variety of representations and strategies that students must learn but does not highlight those strategies which are place-value based and will further students’ understanding of the meaning and properties of the operations.

*GO Math!* provides opportunities for students to experience each aspect of Rigor (Conceptual Understanding, Procedural Skill and Fluency, and Application) required in instruction for students to be college- and career-ready[[1]](#footnote-1). Two components of *GO Math!* that attempt to target Conceptual Understanding are “Math Talk” and “Unlock the Problem.” “Math Talk” generally provides quality conceptual discussion question for students. “Unlock the Problem,” however, is often overly scaffolded which means that students are not having authentic opportunities to make sense of problems and engage with mathematical ideas within lessons that address standards calling for Conceptual Understanding. Overall, the lessons attend to Fluency with addition/subtraction and multiplication/division facts as the focus of chapters and there is a “Fluency Builder” activity that shows up several times a week. However, the Fluency Builder activities do not always correlate to the fluency expectations of the grade level. More work is needed throughout the program to ensure that students meet the required fluencies of each grade. Application problems are provided in each lesson in the Problem Solving ◆ Applicationsection. Many of these problems provide opportunities for students to apply mathematical ideas to real-world or mathematical problems. In addition, the “Problem of the Day” provides other opportunities for Application.

Part Two: Program-Level Rules of Thumb for *GO Math!* (K-5)

*How should teachers use the features of the book to make instruction more aligned?*

The Rules of Thumb below provide general guidance for how to leverage certain features of *GO Math!* to align the program to CCR standards with an emphasis on the Standards for Mathematical Practice (SMPs).  Because the practice of teaching is about so much more than what is provided in instructional materials, the Rules of Thumb serve as general guidance. They are not meant to replace teacher judgement about exactly how to use the materials in every case. There may be times when the Rules of Thumb suggest omitting a certain feature but a teacher still chooses to use that feature sparingly based on the specific content or learning goal for a particular lesson. Note: Some of these features may be slightly different in the Kindergarten materials, as the program is structured a bit differently.

The Rules of Thumb are intended to help users make decisions about how to use the program in a way that is true to the intent of the SMPs. The current references to the SMPs in the program are sometimes inconsistent or inaccurate.  By incorporating the recommendations below, it is much more likely that classroom instruction will allow opportunities for students to engage in the SMPs.

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| **Rule of Thumb** | **Rationale** |
| **1) Daily Routines:**  **Fluency Builder**: Use only activities that are related to grade-level fluency expectations. See specific guidance on how to supplement in each grade-level document.    **Vocabulary Builder**: Rather than doing this as a separate activity, incorporate vocabulary, where appropriate in daily lessons. | Fluency builder does not consistently match grade-level expectations for fluency. More consistent practice is needed to ensure students meet the fluency expectations of each grade level.  MP.6: Vocabulary should be embedded in the lesson as students use and understand precise mathematical vocabulary. |
| **2) Unlock the Problem/Listen and Draw:** Present the problem to students without the scaffolding provided on the student-facing worksheet (e.g., project the problem on the board and have students solve in a math notebook.) Use the scaffolding to drive questions for students as they work and use strategies presented, including those in “Another Way” section as a frame for driving class discussion about student work. It may be also necessary to remove the scaffolding and prompts from the Share and Show that follow these features. | MP.1 requires students to make sense of and solve problems. MP.4 requires students to have opportunities to use mathematics to model problems. |
| **3) Math Talk:** These bubbles should be used for class discussion or writing prompts for students, especially when lessons align to standards that require Conceptual Understanding. | Students need opportunities to respond to conceptual discussion questions to meet the Standards’ expectations for Conceptual Understanding. |
| **4) Problem Solving ◆ Application (Real World):** Make sure to allow time for students to do these problems, particularly when addressing standards that require Application. **Go Deeper/Think Smarter** generally provide problems that make a good basis for conceptual discussions. Use these for discussion, particularly when addressing standards that require Conceptual Understanding. | MP.3 requires that students have opportunities to construct arguments and critique the reasoning of others which can happen during discussions about these problems. |
| **5) Approach to Strategies and Models for Operations:**Provide more opportunities than are currently offered for students to choose which strategies, representations, and models they use to solve problems. In some cases, this may mean presenting problems that require specific strategies, representations, and models without suggesting or providing those supports outright. [See Chapter Rules of Thumb for more specific guidance at each grade level.]    **Note:** This Rule is not saying that strategies, representations, and models should be excluded from instruction. Consistent with the Standards, all are helpful in building students’ understanding of the mathematics. The Rule is intended to incorporate the language of MP.5 and ensure that students ultimately are expected to make choices about which tools to use to solve problems instead of too often being given specific tools within the problems. | Many standards offer examples or choices for models or representations to use to perform operations or solve problems (e.g., 2.NBT.B.7: Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method). As articulated in MP.5, students should “make sound decisions about when...tools might be helpful.” |
| **6) General Approach to Vocabulary:** Do not use the **Developing Math Language** section in the front matter of each chapter. While the listed vocabulary words may be useful in some cases, definitions can be inaccurate or go above grade-level expectations. **Vocabulary Strategy** sections distract from the work of the grade. Vocabulary instruction should be integrated into the work of the lesson.  Skip **Vocabulary Builders/Games/Write Way** at the beginning of each chapter. This distracts from the work of the grade. | MP.6 requires attending to precision. The program tends to treat vocabulary as a topic to be taught separately rather than as part of the work of the content standards and MPs. Integrating vocabulary work into the lessons will allow students to communicate precisely and accurately about their mathematical ideas. |
| **7) Assessment:**   * Eliminate any questions aligned to lessons/content that has been deleted. * Add in vetted questions that are aligned to lessons that have been added. * Remove any directions in questions that require a specific strategy or model. | Alignment to content standards |

Part Three: Grade-Level Rules of Thumb for *GO Math!* (Grade 1)

*What should teachers think about throughout the course of the year specifically for Grade 1 to make instruction more aligned?*

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| **Rule of Thumb** | **Rationale** |
| Use the word *equation* often to provide a more mathematically precise alternative to some of the textbook language including number sentence, math sentence, addition sentence, and subtraction sentence. | MP.6 requires students to attend to precision, including the use of precise mathematical language. |
| Use the **Grade 1:** **Resources for Developing Grade-Level Fluencies** list to provide distributed practice on addition and subtraction within 10 across the school year. | 1.OA.C.6 requires fluency within 10 and this is a prerequisite for the high leverage strategy of “making 10” that begins in Chapter 3. |
| For corresponding edits to the chapter tests, please see the [Chapter Test Alignment](http://www.achievethecore.org/file/3514). | |

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)?*

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| **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 |  |  |

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| **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. |

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| **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 |  |  |

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| **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. |

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| **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](https://www.unbounded.org/math/grade-1/module-2/topic-a/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 |  |  |

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| **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. |

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| **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](https://www.unbounded.org/math/grade-1/module-1/topic-g/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](https://commoncoretools.files.wordpress.com/2011/05/ccss_progression_cc_oa_k5_2011_05_302.pdf)). |
| 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 |  |  |

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| **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. |

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| **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](https://www.illustrativemathematics.org/content-standards/1/OA/A/1/tasks/162) * [Illustrative Mathematics, Sharing Markers](https://www.illustrativemathematics.org/content-standards/1/OA/A/1/tasks/163) * [Illustrative Mathematics, Boys and Girls, Variation 1](https://www.illustrativemathematics.org/content-standards/1/OA/A/1/tasks/161) * [Illustrative Mathematics, Field Day Scarcity](https://www.illustrativemathematics.org/content-standards/1/OA/A/1/tasks/1317) | 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](https://commoncoretools.files.wordpress.com/2011/05/ccss_progression_cc_oa_k5_2011_05_302.pdf)). |
| 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](https://www.illustrativemathematics.org/content-standards/1/OA/A/1/tasks/160) * [Illustrative Mathematics, The Pet Snake](https://www.illustrativemathematics.org/content-standards/1/OA/A/1/tasks/196) * [Illustrative Mathematics, Link-Cube Addition](https://www.illustrativemathematics.org/content-standards/1/OA/A/1/tasks/1650) * [Illustrative Mathematics, School Supplies](https://www.illustrativemathematics.org/content-standards/1/OA/A/1/tasks/2) | 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](https://commoncoretools.files.wordpress.com/2011/05/ccss_progression_cc_oa_k5_2011_05_302.pdf)). |

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| **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. |

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| **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](https://www.unbounded.org/math/grade-1/module-4/topic-a/lesson-3) * [Engage NY, Module 4, Lesson 4](https://www.unbounded.org/math/grade-1/module-4/topic-a/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](https://www.unbounded.org/math/grade-1/module-4/topic-a/lesson-5) * [Engage NY, Module 4, Lesson 6](https://www.unbounded.org/math/grade-1/module-4/topic-a/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 |  |  |

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| **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. |

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| **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](https://www.illustrativemathematics.org/content-standards/1/NBT/B/2/tasks/987) * [Illustrative Mathematics, The Very Hungry Caterpillar](https://www.illustrativemathematics.org/content-standards/1/NBT/B/2/tasks/1150) | 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 |  |  |

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| **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. |

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| **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](https://www.illustrativemathematics.org/content-standards/1/NBT/C/4/tasks/2068) | 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 |  |  |

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| **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. |  |

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| **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 |  |  |

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| **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. |  |

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| **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 |  |  |

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| **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. |  |

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| **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 |  |  |

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| **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. |  |

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| **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 |  |  |

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| **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. |  |

1. Student Achievement Partners, The Common Core State Standards Shifts in Mathematics

   http://achievethecore.org/page/900/the-common-core-state-standards-shifts-in-mathematics [↑](#footnote-ref-1)