"Fluency in each grade involves a mixture of just knowing some answers, knowing some answers from patterns (e.g., "adding 0 yields the same number"), and knowing some answers from the use of strategies. It is important to push sensitively and encouragingly toward fluency of the designated numbers at each grade level, recognizing that fluency will be a mixture of these kinds of thinking which may differ across students" (CC/OA Progression, p. 18).

Resources for Developing Grade-Level Math Fluencies—Grade 4

How to Use These Resources

This document provides a set of short activities extracted from EngageNY, an open educational resource, to supplement fluency practice. Teachers are encouraged to use the activities in their textbooks that align to grade-level standards and supplement with the resources in this document.

The activities are designed to support students' progress toward grade-level fluencies. They are intentionally short, providing educators the flexibility to use them before or after a lesson or anytime during the school day. Since they build on work that students did in previous grades, they can be used starting very early in the school year. The resources are organized by standard.

Grade 4 Fluency Activities

Key — "T" denotes "teacher" and "S" denotes "student"

Activity: RENAME THE UNITS (5 minutes) Materials: (S) Personal white board Standard: 4.NBT.B.4 EngageNY, Module 1, Lesson 6	Directions: T: (Write 54,783.) Say the number. S: 54,783. T: How many thousands are in 54,783? S: 54 thousands. T: (Write 54,783 = _thousands _ones.) On your personal white board, fill in the equation. S: (Write 54,783 = 54 thousands 783 ones.) T: How many ten thousands are in 54,783? S: 5 ten thousands. T: (Write 54,783 =_ten thousands _hundreds _ones.) On your board, fill in the equation. S: (Write 54,783 = 5 ten thousands 47 hundreds 83 ones.) Follow the same process and sequence for 234,673.
Activity: ADD COMMON UNITS (3 minutes) Materials: (S) Personal white board Notes: This mental math fluency activity prepares students for understanding the importance of the algorithm. Standard: 4.NBT.B.4 EngageNY, Module 1, Lesson 11	Directions: T: (Project 303.) Say the number in unit form. S: 3 hundreds 3 ones. T: (Write 303 + 202 = _.) Say the addition sentence, and answer in unit form. S: 3 hundreds 3 ones + 2 hundreds 2 ones = 5 hundreds 5 ones. T: Write the addition sentence on your personal white boards. S: (Write 303 + 202 = 505.) Repeat the process and sequence for: 505 + 404/ 5,005 + 5,004/ 7,007 + 4,004/ 8,008 + 5,005.

Grade 4 Fluency Activities

Activity: SUBTRACT COMMON UNITS (6 minutes) Materials: (S) Personal white board Notes: This mental math fluency activity prepares students for understanding the importance of the subtraction algorithm. Standard: 4.NBT.B.4 EngageNY, Module 1, Lesson 13	Directions: T: (Project 707.) Say the number in unit form. S: 7 hundreds 7 ones. T: (Write 707 – 202 = _.) Say the subtraction sentence and answer in unit form. S: 7 hundreds 7 ones – 2 hundreds 2 ones = 5 hundreds 5 ones. T: Write the subtraction sentence on your personal white boards. S: (Write 707 – 202 = 505.) Repeat the process and sequence for: 909 – 404/ 9,009 – 5,005/ 11,011 – 4,004/ 13,013 – 8,008.
Activity: ADD UP TO THE NEXT UNIT (3 minutes) Materials: (S) Personal white board Notes: This mental math fluency activity prepares students for understanding the importance of the algorithm. Standard: 4.NBT.B.4 EngageNY, Module 1, Lesson 19	Directions: T: (Write 8.) How many more to make 10? S: 2. T: (Write 80.) How many more to make 100? S: 20. T: (Write 84.) How many more to make 100? S: 16. Repeat with the following numbers to make 1000: 200, 250, 450, 475, 600, 680, 700, 720, 800, 805, 855, 945.

Grade 4 Fluency Activities

Activity: FIND THE SUM/DIFFERENCE (6 minutes) Materials: (S) Personal white board Notes: This fluency activity prepares students for understanding the importance of the algorithm. Standard: 4.NBT.B.4 EngageNY, Module 1, Lesson 12	Directions: T: (Write 417 + 232 = _.) Solve by writing horizontally or vertically. S: (Write 417 + 232 = 649.) Repeat the process and sequence for: 7,073 + 2,312/ 949 + 451/ 23,944 + 6,056 + 159,368/ 13,705 + 4,4123/ 538 + 385 + 853. This activity can be repeated using the following sequence of problems: 6,065+3,73/ 7,045 – 4,003/ 8,056 – 5,004/ 13,806+4,393/ 845 – 18/ 935–17/ 5,928+124/ 5,725 – 915/ 4,625 – 815/ 629 + 296 + 962/ 34,736 – 2,806/ 45,836 – 2,906.
Activity: RENAME UNITS TO SUBTRACT (5 minutes) Notes: This fluency activity supports further practice of decomposing a larger unit to make smaller units in order to subtract. Standard: 4.NBT.B.4 EngageNY, Module 1, Lesson 19	Directions: T: (Write 1 ten – 6 ones.) Am I ready to subtract? S: No. T: Rename 1 ten as 10 ones. Say the entire number sentence. S: 10 ones minus 6 ones is 4 ones. Repeat with 2 tens – 6 ones/ 2 tens – 1 ten 6 ones/ 1 hundred – 6 tens/ 2 hundreds – 4 tens/ 3 hundreds –1 hundred 4 tens/ 5 thousands – 3 hundreds/ 5 thousands – 3 thousands 3 hundreds/ 2 ten thousands – 3 hundreds.

Grade 4 Fluency Activities

Activity: ADD AND SUBTRACT (4 minutes) Materials: (S) Personal white board Notes: This fluency activity reviews the yearlong Grade 4 fluency standard for adding and subtracting using the standard algorithm. Standard: 4.NBT.B.4 EngageNY, Module 4, Lesson 1	Directions: T: (Write 654 thousands 289 ones.) On your personal white boards, write this number in standard form. S: (Write 654,289.) T: (Write 245 thousands 164 ones.) Add this number to 654,289 using the standard algorithm. S: (Write 654,289 + 245,164 = 899,453 using the standard algorithm.) Continue the process for 591,848 + 364,786. T: (Write 918 thousands 670 ones.) On your board, write this number in standard form. S: (Write 918,670.) T: (Write 537 thousands 159 ones.) Subtract this number from 918,670 using the standard algorithm. S: (Write 918,670 – 537,159 = 381,511 using the standard algorithm.) Continue the process for 784,182 – 154,919 and 700,000 – 537,632.
Activity: GRADE 4 CORE FLUENCY DIFFERENTIATED PRACTICE SETS (5 minutes) Materials: (S) Core Fluency Practice Sets Notes: In this lesson and throughout G4 Module 7, Fluency Practice includes an opportunity for review and mastery of the addition and subtraction algorithm by means of the Core Fluency Practice Sets. Four options are provided in this lesson: a) Practice Set A is multi-digit addition. b) Practice Set B is multi-digit subtraction. c) Practice Set C is multi-digit subtraction with zeros in the minuend. d) Practice Set D is multi-digit addition and subtraction. All Practice Sets have a Part 1 and a Part 2. Note that Part 2 has fewer regroupings and may be used for students working below grade level. The answers to both Practice Sets are the same for ease of correction. Standard: 4.NBT.B.4 EngageNY, Module 7, Lesson 2	Directions: Students complete as many problems as possible in 120 seconds. Collect any Practice Sets that have been completed within the 120 seconds and check the answers. Students who do not finish in 120 seconds can be encouraged to use their Practice Sets for practice at home or for remedial practice in the classroom. The next time the Practice Sets are used, students who have successfully completed their set with 100% accuracy can move to the next level. Others should repeat the same level until mastery. Keep a record of student progress. For early finishers, assign a counting pattern and start number — e.g., “Finish early? Count by sevens starting at 168 on the back of your Practice Set.” Celebrate improvement and advancement. Encourage students to compete with themselves rather than their peers. Notify caring adults of each child’s progress.
Computational Practice Standard: 4.NBT.B.4	• Add Two Whole Numbers with Carrying (4-6 Digits) • Subtract Two Whole Numbers with Regrouping (4-6 Digits) • Determine the Unknown Number in 4-Digit to 6-Digit Addition Equation • Determine the Unknown Number in 4-Digit to 6-Digit Subtraction Equation