Topic H

Subtraction Word Problems

1.OA.1, 1.OA.4, 1.OA.5, 1.OA.8

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| Focus Standard: | 1.OA.1 | Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart and comparing*,* with unknowns in all positions*,* e.g., by using objects, drawings and equations with a symbol for the unknown number to represent the problem. |
| 1.OA.4 | Understand subtraction as an unknown-addend problem. *For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.* |
| Instructional Days: | 5 |  |
| Coherence -Links from: | GK–M4 | Number Pairs, Addition and Subtraction to 10 |
| -Links to: | G2–M4 | Addition and Subtraction Within 200 with Word Problems to 100 |

With a smooth transition from Topic G, Topic H provides students with rich experiences connecting subtraction to their solid foundation of addition (**1.OA.4**), using various word problem types (**1.OA.1**). Lesson 28 begins with students solving action-based *take from with result unknown* problems, as they start with a set of objects, then take some away, and finally end with a smaller set of objects. Students then work with simple math drawings and equations to represent these *take from with result unknown* stories and connect the act of crossing off to the symbol for subtraction.

Then, Lesson 29 allows students to solve the relationship-based *take apart with result unknown* problems, which are both connected to *take from with result unknown* problems and are the counterpart to the familiar *put together with addend unknown* problems from earlier topics. In both Lessons 28 and 29, students make varied statements to explain the remaining amount, e.g., “There were 4 bears left,” “Four bears stayed in the forest,” “Then, there were 4 bears altogether.” This permits students to think and speak flexibly about the unknown, rather than associate specific key words with a particular operation. For example, *altogether* does not always indicate addition.

Lesson 30 furthers the connection between addition and subtraction as teachers have students discuss ways to solve *add to with change unknown* word problems, as they use simple math drawings and equations to represent the problem and solution. With the introduction of a whole new problem type in Lesson 31, students use drawings to solve *take from with change unknown* problems such as, “Ben had 7 pencils. He gave away some. Now, he has 5. How many pencils did he give away?” The topic ends with another new relationship problem—*put together/take apart with addend unknown*. Throughout Topic G, students discuss and apply their understanding of addition as it relates to subtraction and vice versa.

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| A Teaching Sequence Towards Mastery of Subtraction Word Problems |
| Objective 1: Solve *take from with result unknown* math stories with math drawings, true number sentences, and statements, using horizontal marks to cross off what is taken away. (Lesson 28) |
| Objective 2: Solve *take apart with addend unknown* math stories with math drawings, equations, and statements, circling the known part to find the unknown. (Lesson 29) |
| Objective 3: Solve *add to with change unknown* math stories with drawings, relating addition and subtraction. (Lesson 30) |
| Objective 4: Solve *take from with change unknown* math stories with drawings. (Lesson 31) |
| Objective 5: Solve put *together/take apart with addend unknown* math stories. (Lesson 32) |