Topic E

Modeling Numbers Within 1,000 with Place Value Disks

2.NBT.A

Focus Standard:	2.NBT.A	Understand place value.
Instructional Days:	5	
Coherence -Links from:	G1–M6	Place Value, Comparison, Addition and Subtraction to 100
-Links to:	G2–M4	Addition and Subtraction Within 200 with Word Problems to 100
	G2–M7	Problem Solving with Length, Money, and Data

In Topic E, students transition to the more abstract place value disks that are used through Grade 5 for modeling very large and very small numbers. The foundation has been carefully laid for this moment since Kindergarten, when students first learned how much a number less than 10 needs to make ten. Students repeat the counting lessons of the bundles and money but with place value disks (**2.NBT.2**).

The three representations—bundles, money, and disks—each play an important role in students' deep internalization of the meaning of each unit on the place value chart (**2.NBT.1**). Like bills, disks are "traded," "renamed," or "changed for" a unit of greater value (**2.NBT.2**).

Finally, students evaluate numbers in unit form with more than 9 ones or tens, for example, 3 hundreds 4 tens 15 ones and 2 hundreds 15 tens 5 ones. Topic E also culminates with a problem-solving exploration in which students use counting strategies to solve problems involving pencils that come in boxes of 10 (**2.NBT.2**).

A Teaching Sequence Toward Mastery of Modeling Numbers Within 1,000 with Place Value Disks
Objective 1: Count the total value of ones, tens, and hundreds with place value disks. **(Lesson 11)**
Objective 2: Change 10 ones for 1 ten, 10 tens for 1 hundred, and 10 hundreds for 1 thousand. **(Lesson 12)**
Objective 3: Read and write numbers within 1,000 after modeling with place value disks. **(Lesson 13)**
Objective 4: Model numbers with more than 9 ones or 9 tens; write in expanded, unit, standard, and word forms. **(Lesson 14)**
Objective 5: Explore a situation with more than 9 groups of ten. **(Lesson 15)**