

name:

date:

#:

Building Three-Digit Numbers

Task 1: Building Numbers

Directions: Listen as your teacher tells you what to take out. For each number, do the following:

- Represent the number with base 10 blocks
- Represent the number with place value cards
- "Build" the number by stacking the place value cards
- Represent the number using the place value chart

1)

Hundreds	Tens	Ones

4)

Hundreds	Tens	Ones

2)

Hundreds	Tens	Ones

5)

Hundreds	Tens	Ones

3)

Hundreds	Tens	Ones

6)

Hundreds	Tens	Ones



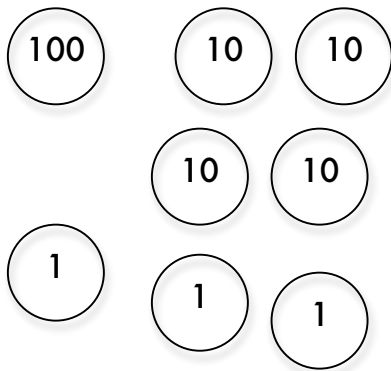
Task 2: Building Numbers Practice

Directions: For each number, do the following:

- Represent the number with base 10 blocks
- Represent and draw the number with place value discs
- Represent and record the number with place value cards
- Represent and record the number as a number bond
- Represent the number on the place value chart
- Write the number in words

Number: 143

Place Value Discs



Place Value Cards

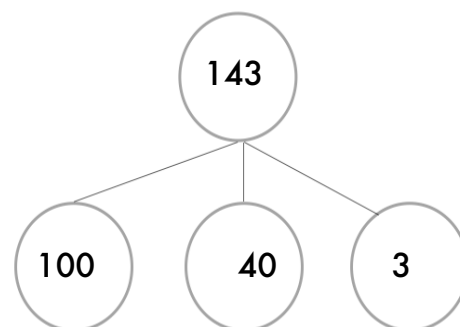
$100 + 40 + 3$

1	0	0
	4	0
		3
1	4	3

Place Value Chart

Hundreds	Tens	Ones
1	4	3

Number Bond



Number in Words: One Hundred Forty Three



7) 561

16) 901

8) 700

17) 910

9) 405

18) 856

10) 450

19) 250

11) 504

20) 705

12) 210

21) 417

13) 724

22) 390

14) 356

23) 477

15) 233



Teacher Directions

Materials:

- Base 10 blocks - 9 hundreds, 9 tens and 9 ones per student
- Place value discs - 9 hundreds, 9 tens and 9 ones - per student
- Place value cards - 1-9, 10-90, and 100-900
- Clear sheet protectors – 1 per student
- Dry erase markers – 1 per student

Objective:

Students will build an understanding of place value by using and connecting various tools and equivalent recording methods: base 10 blocks, place value discs (to which they will transition), number bonds, expanded notation, place value notation and place value cards.

Directions:

Task 1: Building Numbers

Pass out place value cards to each pair of students. Have them sort the cards into piles by place value.

Note: if you have extra time in this unit, you can begin by letting students sort the cards any way they wish and then have pairs share their sort while the rest of the class tries to guess their sorting rule.

Pass out base 10 blocks and the student sheet. Explain to the class that you will say a number aloud, and then must build it with base 10 blocks as well as get the place value card that matches. Once you say done, they will combine the cards to form a single number as well as combine blocks and ensure the number is the same with blocks, place value cards and in the place value chart.

Use the following prompts to support students in questions #1-6.

“Get out 3 hundreds” (pause to make sure students have out 3 hundred blocks and the 300 place value card). “Get out twenty or 2 tens” (again, pause to see all students have out a 20 place value card and two tens and the cards and blocks from the previous prompt). “Get out 4 ones” (pause to make sure students have 4 ones and the 4 place value card). Ask students to combine the cards to form one number and record this on the place value chart. Ask students to count the blocks and tell you the name of the



number: 324 or three hundred twenty four. Continue the same process for each of the numbers listed below.

2. Five hundreds. Four tens. Five ones.
3. One hundred. Nine tens. No ones.
4. 7 tens. Three ones.
5. 8 hundreds. 2 ones.
6. 9 hundreds. 4 tens. 1 one.

Task 2: Building Number Practice

Once students are doing well with this move on to task 2. If students need additional practice, add more numbers to task 1. For this task, you will now introduce another tool, place value discs and another recording method - number bonds. Pass out the place value discs to each pair. To introduce each of the disks, have students stay on task 1 and use the discs to represent the same numbers using the discs instead of the blocks.

Note: If students struggle with discs, you do not have to use them; they are just a way to slowly move students from concrete to abstract in this unit and later for addition and subtraction.

Once students can represent a number with the discs, show the students how to record the number using number bonds, by putting each place value into its own circle (you are asking students to decompose a number into hundreds, tens and ones). This is a crucial step for students' later understanding of regrouping in addition and subtraction.

Direct the class's attention to page 2 of the student sheet and model the first problem for the students using the base 10 blocks, then the place value discs. Take out the place value cards and show the students how to build 143 by getting the 100 place value card, laying the 40 place value card on top of 100 and then the 3 on top of the 40. All aligned on the right. Ask the students what numbers comprise 143 and then record the numbers in the table provided. Explain how the number bonds work in terms of decomposing or breaking apart a number by place value. Record the digits in the place value chart and finally write the number in words. Once students understand what they must do, let them work in pairs or alone (materials permitting).

Distribute the Building Numbers Sheet (placed inside a sheet protector) to each student. Students will be working on one number at a time using the Building Numbers Sheet in the sheet protector and an expo marker. After a student completes one



problem, the student should check with their neighbor. Students should erase and work on the next number. Monitor students' use of manipulatives. You may choose to stop every 5-10 minutes to have a student come model one of the problems or you may choose to give students about 20-30 minutes to work alone or with a partner. Have students do as many of the problems provided as needed to demonstrate true understanding of how to build three digit numbers.

Answer Key:

Task 1

1)

H	T	O
3	2	4

2)

H	T	O
5	4	5

3)

H	T	O
1	9	0

4)

H	T	O
7	0	3

5)

H	T	O
8	0	2

6)

H	T	O
9	4	1

Task 2

#'s 7-23

- Check students' base 10 blocks for accuracy when building numbers.
- Check students' place value discs for accuracy when representing the number.
- Check students' place value cards for accuracy when building.
- Check students' number bonds for accuracy.
- Check students' place value chart for accuracy.
- Check students' number in words for accuracy.

