

Diagnostic TASK

FOCUS

Understand Numbers

- Key Understanding 6

Flexible Numbers

Years/Grades 6–8

Purpose

To explore children's understanding that numbers can be partitioned in many ways (and how), and if children can produce non-standard partitions of a number.

Producing work samples

Whole class or small group activity

Children complete the worksheet individually. Interview some individuals and ask them to explain how they knew to make the number in the way that they did.

Children cut the numbers page into separate cards and use the cards to make each of these numbers: 312, 400, 454, 401, 204, 61 in as many ways as they can. They record the ways they made each number on the worksheet and then put the cards back into the centre to make the others.

Teaching place value concepts separately as a prerequisite to double digit addition and subtraction is ineffective and unnecessary. . . . In fact, manipulative materials may actually detract from thinking because tasks are too easy to do with the materials.

Ross, S., 1989, Parts and Wholes and Place Value: A Developmental View, *Arithmetic Teacher*, 36 (6), p 47–51

Flexible Numbers

Name _____ Year/Grade _____ Date _____

Use the cards on the Flexible Numbers Cut Out Sheet to make each number in **as many ways as you can**. Record the different ways as you go. Put the cards back into a pile to use for the next number.

For example you can make up the number **532** using these cards from the card sheet.

5 hundreds

3 tens

2 ones


61

312

454

Flexible Numbers

Cut Out Sheet



14 ones	1 one	4 ones
2 ones	4 hundred	10 ones
11 ones	12 ones	3 tens
4 tens	5 tens	40 tens
41 tens	42 tens	1 ten
45 tens	6 tens	3 hundreds
31 tens	2 hundreds	11 tens