**Dividing in Fourth Grade**

**Chip Away, Hook, or Vertical Method**

To solve complex division problems in fourth grade, students learn a whole number version of long division.

In this method, students use friendly numbers such as multiples of 10 to pull out as many whole groups of the divisor (number divided by) as they can from the dividend (number being divided).

We encourage students to first estimate a quotient so they can pull out the biggest numbers first, such as multiples of 100, and move on to multiples of 10, ending with smaller groups. When there are no more groups of pull out, students know they have arrived at the quotient, which may or may not include a remainder.

Children often first start “chipping away” at the number by pulling out single groups of 10, but change strategies when they begin to see the relationship between the divisor and the dividend.

 862 ÷ 3 =

 Estimate:

 Round 862 to 900

 Keep 3 at 3

 900 ÷ 3 = 300

 862 ÷ 3 is about 300

Divisor

Dividend

3 862 100

 -300

 562 100

 -300

 262 80

 -240

 22 7

 -21

 1 287r1

Quotient