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| **Grade 4** |
| **Grade: 4 Subject: Math**  **Unit: Number: Division** |
| **Learning Target:** Use arrays to solve division problems with concrete materials |
| **Curriculum Outcomes**: SCO N07 Students will be expected to demonstrate an understanding of division (one-digit divisor and up to two-digit dividend) to solve problems by * using personal strategies for dividing, with and without concrete materials
* estimating quotients
* relating division to multiplication

N07.01 Model the division of two given numbers without a remainder, limited to a one-digit divisor and up to a two-digit dividend, using concrete or visual representations, and record the process pictorially and symbolically.N07.02 Model the division of two given numbers with a remainder, limited to a one-digit divisor and up to a two-digit dividend, using concrete or visual representations, and record the process pictorially and symbolically. (It is not intended that remainders be expressed as decimals or fractions.)N07.06 Solve a given division problem by relating division to multiplication (e.g., for 80 ÷ 4, we know that 4 × 20 = 80, so 80 ÷ 4 = 20). |
| **Screencast support:** [Division using arrays](https://www.youtube.com/watch?v=mwig70aQuHI) |
| **Resources/AT Tips:**  Number Frames appShow me appColor Tiles – NSVS pearson interactive toolsShowbie |
| **Lesson Procedure** | **21st Century Skills** |
| **I do:** * Activate prior knowledge: Arrays – Have the students use the counters on the number frames app to evenly divide (fair share) 12. Have them write a division sentence and a corresponding multiplication sentence.
* As a class review all the different arrays that they found for 12. Record the division sentences and multiplication sentences.
 |  find, validate remember, understand  collaborate, communicate analyze, synthesizecritical thinking evaluate, leverage create, publish citizenship |
| **We do:** * Have the students use the number frames app to divide 25 into 3 groups. They may collaborate with their tablemate when they get stuck.
* Ask the students what the corresponding division sentence would be? Model on the board the two ways you might set this sentence up showing the proper placement of the digits.
* Do more than example together showing remainders.
* Give the students a set of numbers e.g. 3,6, 28, and have them write four related facts -
 |  Notes |
| **You do:** * Students use the showme app to solve/show the question 53 divided by 5.
* Begin to work on the extra practice sheet (below). Walk around the room correcting as they work assessing for comprehension of the skill.
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| **We share:** Share show me presentations correcting the question posed in class |   |
| **Differentiation** |
| **Adaptations:** Struggling students should watch the screencast, [Division with arrays](https://www.youtube.com/watch?v=mwig70aQuHI). Continue to have them practice fair shares with the number frames app. Start with dividing by 2 and 3. | **Enrichment:** Students should begin working with larger numbers. |
| **Assessment:**Students should be continuously assessed as we work through this unit. Students that are experiencing difficulty may need one on one time with concrete manipulatives while others move on.  |
| **Notes:** |

Dividing by Numbers 1 to 9

1. Find each product.
Then write a different multiplication fact and two division facts.

 a) 7 × 6 = \_\_\_\_\_\_

 b) 9 × 8 = \_\_\_\_\_\_

 c) 4 × 8 = \_\_\_\_\_\_

2. Write four related facts for each set of numbers. Use counters on number frames app when needed 

 a) 8, 6, 48 b) 3, 9, 27

 c) 9, 7, 63

3. Divide. Use the counters on number frames app  when needed.

 a) 8 ÷ 1 b) 40 ÷ 8

 c) 81 ÷ 9 d) 64 ÷ 8

 e) 18 ÷ 9 f) 25 ÷ 5

 g) 9 ÷ 9 h) 42 ÷ 7

### i) 36 ÷ 6 j) 35 ÷ 7