Division – Reception – Year 6

Reception To share objects into 2 groups

Children should:

- Have access to a wide range of counting equipment, everyday objects, number tracks, numicon, numberlines, related stories and songs.

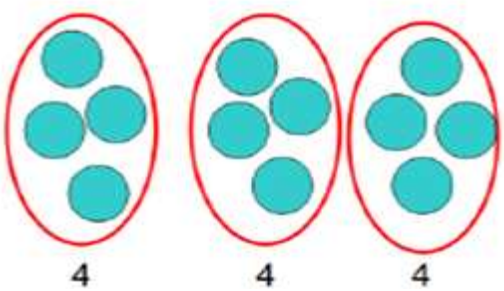
Year 1 Group and share small quantities

Using objects, diagrams and pictorial representations to solve problems involving both grouping and sharing.

How many groups of 4 can be made with 12 stars? = **3**

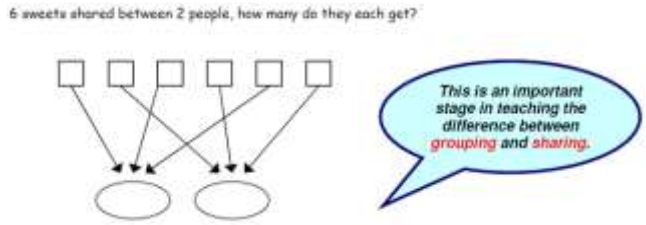
Grouping:

Sharing:



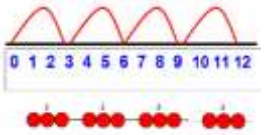
Year 2 **Group and share, using the ÷ and = sign**

Use objects, arrays, diagrams and pictorial representations, and grouping on a number line.



There are 6 sweets, how many people can have 2 sweets each?

Grouping using a number line:



12 ÷ 3 = 4

Year 3 Divide 2-digit numbers by a single digit (where there is no remainder in the final answer)

STEP 1 - Grouping on a number line: Children continue to work out unknown division facts by grouping on a number line from zero.

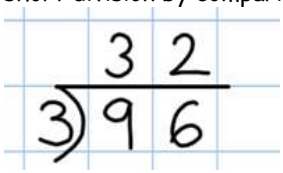
13 ÷ 3 =

They are also now taught the concept of remainders, as in the example. This should be introduced practically and with arrays, as well as being translated to a number line. Children should work towards calculating some basic division facts with remainders mentally for the 2s, 3s, 4s, 5s, 8s and 10s, ready for "carrying" remainders across within the short division method.

Year 4

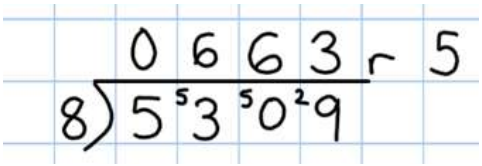
Short division should only be taught once children have secured the skill of calculating "remainders". Children can continue to work on chunking on a numberline for division until confient to move on.

STEP 2- Short division: Once children are secure with division as grouping and demonstrate this using number lines, arrays etc., short division for larger 2-digit numbers should be introduced, initially with carefully selected examples requiring no calculating of remainders at all. Start by introducing the layout of short division by comparing it to an array.



Year 5 Divide up to 3-digit numbers by a single digit (without remainders initially)

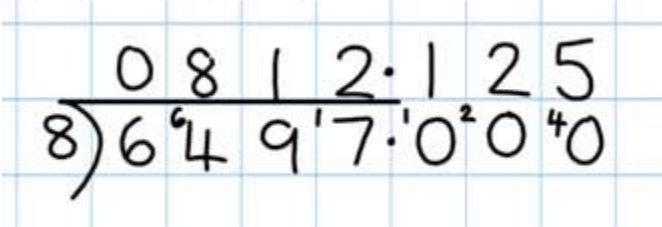
Short division, including remainder answers:
Short division with remainders: Now that pupils are introduced to examples that give rise to remainder answers, division needs to have a real life problem solving context, where pupils consider the meaning of the remainder and how to express it, ie. as a fraction, a decimal, or as a rounded number or value , depending upon the context of the problem.



Year 6 Divide at least 4 digits by both single-digit and 2-digit numbers (including decimal numbers and quantities)

Short division, for dividing by a single digit: e.g. 6497 ÷ 8

Short division with remainders: Pupils should continue to use this method, but with numbers to at least 4 digits, and understand how to express remainders as fractions, decimals, whole number remainders, or rounded numbers. Real life problem solving contexts need to be the starting point, where pupils have to consider the most appropriate way to express the remainder.



Calculating a decimal remainder: In this example, rather than expressing the remainder as r 1, a decimal point is added after the units because there is still a remainder, and the one remainder is carried onto zeros after the decimal point (to show there was no decimal value in the original number). Keep dividing to an appropriate degree of accuracy for the problem being solved.