Lakes Primary School

Division Policy

PROGRESSION THROUGH CALCULATIONS FOR DIVISION

- These standards are age-related expectations and therefore we expect the majority of children to achieve them.
- New learning is likely to be taught to groups rather than the whole class to acknowledge the different learning stages of the children.
- Children need to understand that division is repeated subtraction.
- Children should understand that, unlike multiplication, division is **not** commutative.
- Ensure that children understand the = sign means is the same as, not makes, and that children see calculations where the equals sign is in a different position, e.g. 12 ÷ 3 = 4 and 4 = 12 ÷ 3.
- Children should be encouraged to approximate before calculating and check whether their answer is reasonable.

Many children find division the most difficult calculation, so spend more time on this topic and practice skills to consolidate learning!

FOUNDATION STAGE

- Encourage children to develop a mental picture of the number system in their heads to use for calculation.
- Develop ways of recording calculations using pictures etc.

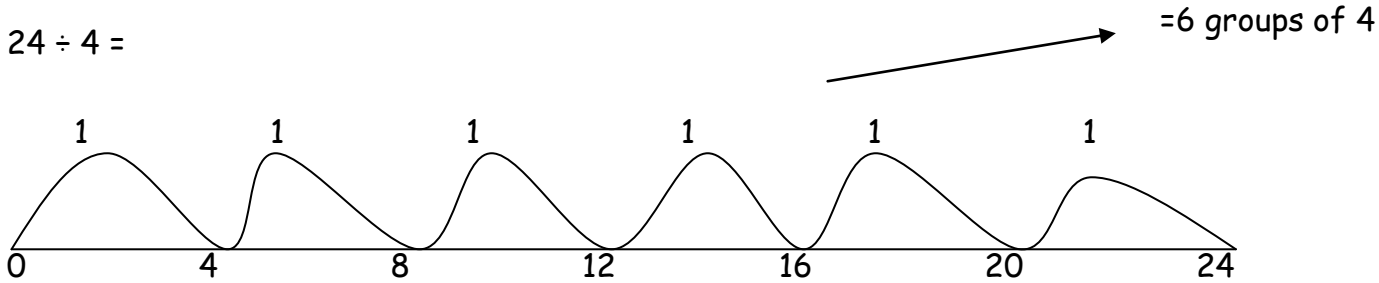
- Put emphasis on the use of appropriate mathematical vocabulary in all situations.
- Practical and real life contexts, grouping objects and use of a variety of resources within areas of learning.

YEAR 1

- Halving and doubling.
- Use of pictorial representations to show groups of.
- Introduce the concept of the division sign ÷
- Begin recording symbols.
- Solve problems that involve sharing and grouping into equal groups.- 'one for me one for you' strategy.

YEAR 2

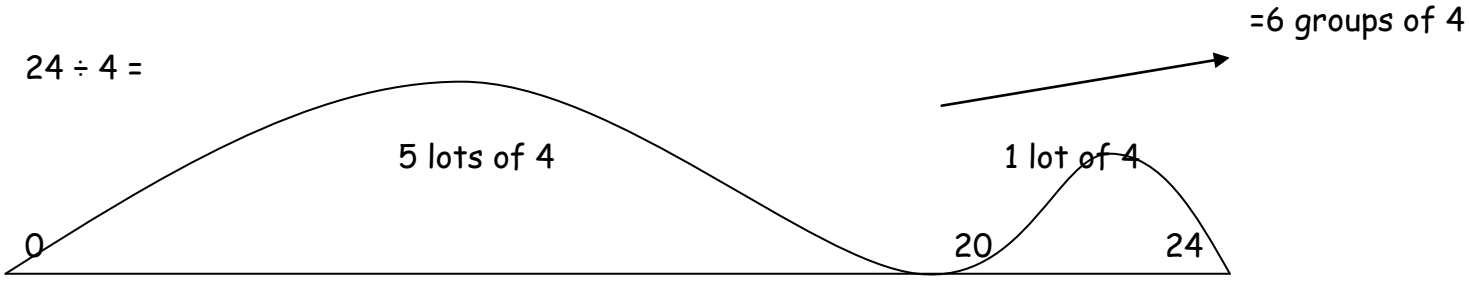
- Sharing equally, e.g. share 8 sweets between 2 people. How many do they get each?
- Grouping: How many 2's are there in 8? Here are 8 shoes, how many pairs is that?
- Practical work,
- Arrays to show groups of equal numbers.
- Use arrays to show the inverse method.
- Use of vocabulary of grouping and sharing.
- Grouping and sharing of larger numbers- only those within tables being learned by the children. Be challenging.
- Introduce the use of number lines to count on in groups. Children start at zero and 'jump up' in groups of the divisor towards the dividend ('big number').



YEAR 3

- Continue with number lines, using a greater range of multiplication tables and begin to use larger numbers.

Develop these number lines to use larger jumps (in tens etc) then move onto:



- Begin to apply number line work to an empty number line, finding remainders.
- Use informal pencil and paper methods to develop into more efficient written methods.
- No partitioning.

YEAR 4

- Teach the formal method of short division.
- TU ÷ U, HTU ÷ U
- Any remainders should be shown as integers, i.e. 14 remainder 2 or 14 r2.

$$4\overline{)\,8\;4}\;=\;2\;1 \qquad 3\overline{)\,9\;6}\;=\;3\;1 \qquad 4\overline{)\,5\;{}^{1}6\;4}\;=\;1\;4\;1$$

YEAR 5

- Continue to develop efficient methods using larger numbers, comparing all methods covered so far to compare efficiency.
- Ensure children understand the process of checking their solutions by using the inverse operation.
- ThHTU ÷ U, HTU ÷ U with remainders

$$6\overline{)\,7\;{}^{1}2\;6\;0}\;=\;1\;2\;1\;0 \qquad 7\overline{)\,8\;{}^{1}7\;{}^{3}5\;8}\;=\;1\;2\;\;5\;1\;\text{r}1$$

YEAR 6

- Consolidate year 5 division with extended work on ThHTU ÷ TU
- Extend to be used with decimal up to 2 decimal places. (which need to be lined up).