Key Stage 1 Maths at LEAP:
A Guide for Parents and Carers.

<u>Year 1.</u> End of year objectives:

- **Count to and across 100, forwards and backwards. Beginning with 0 or 1, or from any given number. Find one more and one less than a number.**

Count whenever you can, from taking stairs, to the number of black cars on the road, to leaves in the park. Start small and focus on counting across the 10s. e.g. 19 to 20, 49 to 50. At other times, you can start on any number. Remember, to count **backwards** too, this is trickier! After 100, children are tempted to say 200, focus on 101, 102 etc.
Give you child a number, ask them what 1 more is. Then 1 less. Start smaller and build up.

- **Count, read and write numbers to 100 in numerals. Understand place value for 2 digit numbers.**

Place value is important here, making sure fifteen isn't written as 51. Children should develop their understanding of the digits in each number and what they represent. The **1** in **17** means 1 ten, also understood as ten ones.

Say a 2 digit number and ask how many tens are in it. Write another number down and ask them to point out the tens and then the ones. Ask what the number would be with 2 more ones.
Play "I am a number with…" Write down a number, hide it and say: *I am a number with 3 lots of ten and 6 ones. What number am I? What number would I be if I added one more lot of 10?* Take it in turns to pick a number, so you play too.

- **Count in multiples of twos, fives and tens**

This supports children's understanding of the number-line, and helps them begin multiplication and division. Start with counting from 0. Choose a number and ask them to count back in multiples e.g. "Can you count back in 5s from 45?" Use a 100 square to start and slowly move away from this.

- **Identify and represent numbers using objects and pictorial representations including the number line, and use the language of equal to, fewer, most, least**

Ask your child to compare numbers or amounts of things using the language "Who has **fewer** chips tonight, you or x?" "Who has the **least** number chips out of us all?"

- **Recognise odd and even numbers**

Say or write down a number. Ask your child whether it is odd or even. Ask them to explain how they know. Start small but begin to see all numbers ending in an even number are even, so they can apply this to numbers to 100.

- **Represent and use number bonds and related subtraction facts within 20**

Children should recall these facts for all numbers off by heart, to 20, by the end of year 1. Play a game of 'ping pong'. Say the number that you are doing the bonds for (eg 14) and then 'ping'. Child says 'pong'. Keep going then 'ping' them number "9" and then 'pong' back the number that you add for 14, "5".

- **Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs**

Give your child different addition and subtraction sentences, both verbally and written down, and see if they can use their fingers, a number line or drawings to calculate.

- **Understand '=' as a balancing sign**

Have a race to get as many number sentences as possible done in a minute. Write them like:

__ = 12 + 6
__ = 9 – 5

- **Solve one-step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher (grouping and sharing)**

Focus on counting in multiples, forwards and backwards. Draw circles and put crosses/boxes/drawings in each. Ask them the repeated addition and multiplication sentences shown in your array.

Multiplication books, songs are all available but check that they a very good understanding of what multiplication is (e.g., it is repeatedly adding the same number) before beginning to learn by heart.

For division, children start by sharing in year 1. Giving them simple sharing problems "I have 6 biscuits to divide between you and your brother. How many do you get each?". They can draw circles to represent each child and share into.

- **Recognise, find and name a half as one of two equal parts of an object, shape and quantity to 20**
- **Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity to 20**

Support your child to share things into groups, between friends or siblings perhaps, and check there are equal amounts in each. Ask them to find $\frac{1}{2}$ or $\frac{1}{4}$ of these things/shapes.

- **Recognise and name common 2D and 3D shapes**

Choose a shape of the week e.g. cylinder. Look for this shape in the environment (tins, candles etc.) Ask your child to describe the shape to you (2 circular faces, 2 curved edges) Play 'guess my shape'. You think of a shape. Your child asks questions to try to identify it but you can only answer 'yes' or 'no' (e.g. Does it have more than 4 corners? Does it have any curved sides?)

- **Describe position, direction and movement, including whole, half, quarter and three quarter turns.**

Mazes/obstacle course-like games can be fun for this, along with simply walking to the park. Give instructions such as 'make a one quarter turn to the left'.

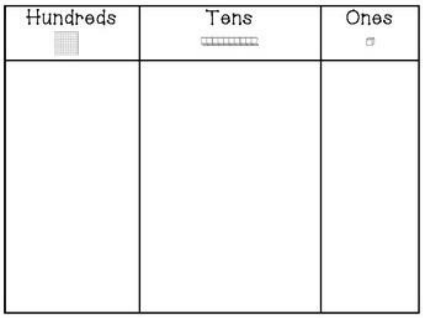
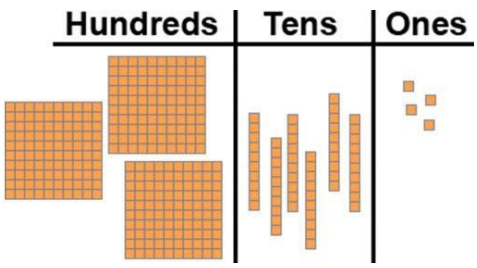
- **Recall language related to dates, days of the week, month, years • Tell time to nearest hour**

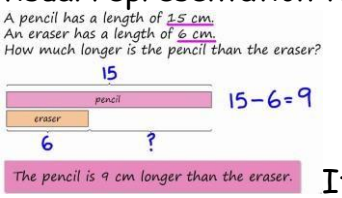
Have calendars and clocks at home, both digital and analogue. Ask what the time is for o'clock times, on both digital and analogue clocks. Talk about the days of the week, what day it is tomorrow and what you will do.

- **Measure mass, height and capacity and compare using language 'heavier/lighter, longer/shorter, full/empty' etc.**

This is a great one to do with cooking, playing at home with tape measures, playing in the bath etc. They can use 'non-standard' units, so things like 'How many hands tall might you be? What about your sister – if she's taller will she be more or less hands tall?'

Glossary of key terms:

Place value	The value of each digit depends on its position in a number. The 6 in 64 has a value of six tens, whereas it has a value of 6 ones in 76.
Place value mat	A3 sheet showing columns to represent the value of each digit in a number. Often used with cubes, straws or Dienes. Shows the number in a concrete way or can be used to add or take away. 
Dienes	Concrete apparatus to show place value, and to help with addition and subtraction. 
Number bonds	Pairs of numbers that add together to make another number, with the expectation that we learn these by heart for instant recall. Eg number bonds to 5: 1 + 4 3 + 2 2 + 3 4 + 1 0 + 5 5 + 0
Fact families	Like a number bond, but with the subtraction facts too. Using the same numbers as part of that 'family'. One fact family for 6 1 + 5 = 6 6 – 5 = 1 5 + 1 = 6 6 – 1 = 5

Bar models	Pictorial representation of a number sentence or word problem, allowing a visual representation to help select the correct operation needed.  It shows a part, part, whole relationship.
Numerator	The top part of the fraction shows how many of the parts we have. $\frac{3}{5}$ ← numerator ← denominator
Denominator	The bottom part of the fraction shows how many equal parts to split into. $\frac{3}{5}$ ← numerator ← denominator
Concrete Pictorial Abstract	Concrete: things children can touch and manipulate, often used to represent numbers. Pictorial: things children can draw or pictures they can use to help with number. Abstract – an understanding of the number and operation without these things.
Array	A pictorial representation of a multiplication sentence, set out in rows and columns: 2 x 4 4 +4 4 x 2 2 + 2 + 2 + 2
Repeated addition	The same number added a number of times. 3 x 4 = 4 + 4 + 4
Inverse	The opposite operation. It can be used to check if you are right, or complete a missing number problem. E.g.: 4 + 5 = 9 helps with 9 – 4 =__
Number sentence	A written maths calculation such as 7 + 5 =
Sum	Only to be used when referring to adding numbers. 28 – 13 = is referred to as a **calculation/number sentence.**
Partition	To break a number down into smaller numbers. Often we partition into tens and ones.
Equivalent Fractions	Fractions that look different but show exactly the same amount.
Regrouping	This may have been referred to as borrowing or grouping previously. For example, when we take a number of tens and move them into the ones so we can subtract e.g. for 57 – 39.