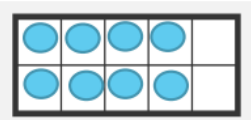


Skill	What does this look like when teaching ? Concrete, pictorial and abstract
Halving	Equal sharing into 2 groups and in a real-life scenario e.g. sharing sweets between 2 friends Whole/part whole model to show the idea of equal sharing  What is the amount? How many parts? How many in each? Use red and yellow counter on a tens frame Children can apply the reverse in real-life scenarios. I make a tower. When I halve it, I have 4. How tall is my tower? Matching tasks-visual to abstract
Counting in 2's	Children should recognise that counting in 2's is the same as doubling. This concept will allow them to build onto and make links to the 4's and 8's times tables. TEACH DOUBLING OF NUMBERS BEFORE YOU TEACH THE 2X TABLES Use arrays to show what happens to the numbers. 2 lots of 4 is the same as 4 lots of 2. Use this array to explain how.  True or false? $2 \times 3 = 3 \times 2$. Draw/make an array to show.  Cameron says this array shows double 4 but Taylor says it shows $2+2+2$. Who is right? Children need to be taught that it is $1 \times 2 = 2$, $2 \times 2 = 4$ etc NOT 2, 4, 6 etc as this won't allow them to make the links later when they have bigger numbers to x by 2. Get out coins to represent repeated addition and multiplication calculations. How much money is there? Write the repeated addition calculation and the multiplication statement. How much would there be if I added 2p more? Spent 2p?  Give real life problems involving repeated addition of two and use concrete materials to act out the problem and solve.  $2+2+2=$

Subtraction of 10
Multiple of 10

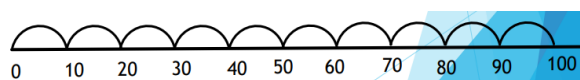
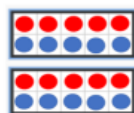
For children to start to make links in an abstract way, get them to write the multiples of ten on an empty 100 square. Use 10-2 to help find 20-2, 30-2 etc and write them in. 10-2=8, 20-2=18 30-2=28. What do they notice? What would be next in the pattern? Use flashcards of full tens frames. Use the first to find 10-6. Predict what the number sentence will be when another ten is added and another etc.

Multiplying by 10:

Children need to see that they are not simply “adding a zero”. Use concrete resources to embed the idea it is 10 x bigger/10 more e.g using 100 square, diennes and number line.

Show in a range of ways: full tens frames, sticks of ten, cubes horizontally across a 100 square etc.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



10-2=8. What would 20-2 be?

I know 10-4=6. What else do I know?

What would 20-6 be? Prove it.
What about 30-6?

11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

5 x
Halve 10 x

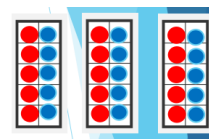
This builds on the idea of halving because it is half ten times. The use of concrete resources will embed the idea that 5 is half of 10 and should be able to understand that they can use that to build up their 5 x tables e.g can they explain why 5 x 6 is the same as 10 x 3 ?

Children should be able to answer q's like:

If 2 x 10 =20, what could 2 x 5 be?

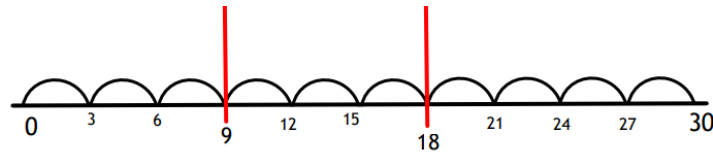
What do you notice about the multiples of ten? Which is the odd one out? Why? 10, 18, 20, 40, 110.

10x4>_____What could it be? What couldn't it be?

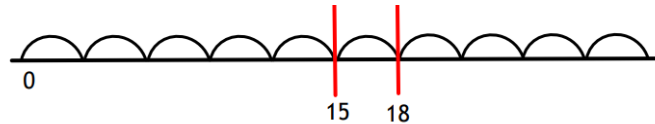


3 x

A counting stick is useful for teaching these. It builds on the earlier strategy of doubling and halving e.g if $3 \times 3 = 9$ what is 6×3 ?

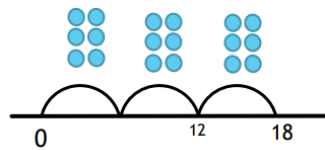
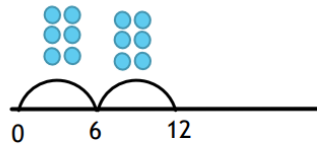


They can also use the strategy of $3 \times 5 = 15 + 3$



Children should be encouraged to continue to use practical resources to support their thinking.

When they are secure, children can make links to tripling the number e.g 3×6



4 x

Double 2 x

Children need to explore it initially using arrays but then move to the counting stick and a number line. When they can start to skip count in 4's eg 4,8,12 etc children need to decide what is their strategy for calculating bigger numbers.

Which tables fact does this show?



If $2 \times 3 = 6$, what would $4 \times 3 = ?$

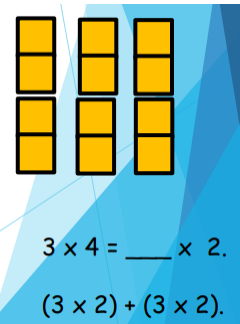


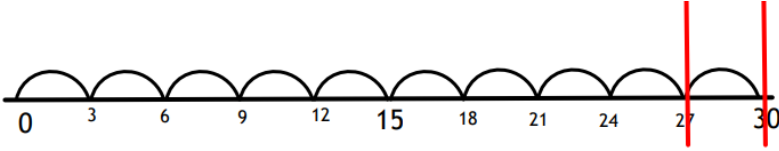
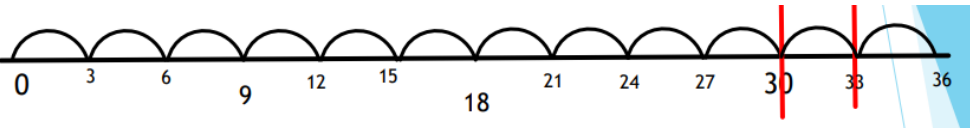
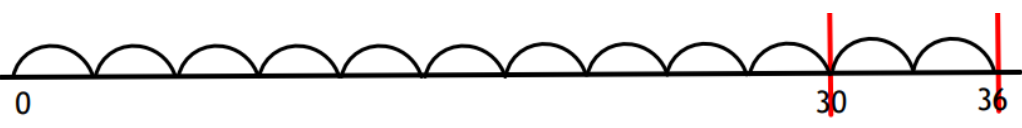
True or false?
 $3 \times 4 = 6 \times 2$.

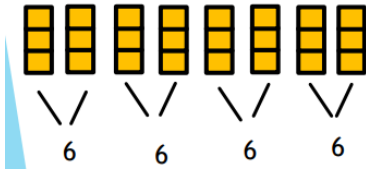
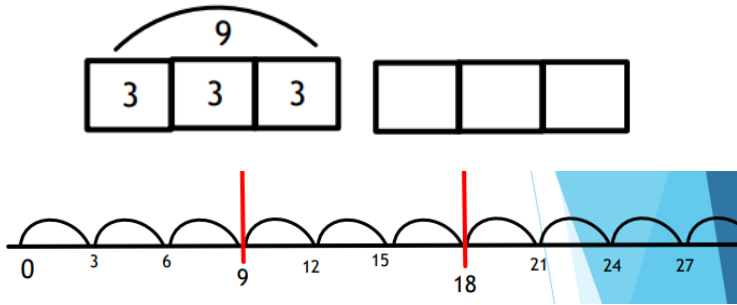
Show me with cubes.

Show me on a number line.

___ fours = 8 twos. Explain why.



9 x 10 x and take 1 multiple off	Children need to be able to build on the idea of subtracting from 10 e.g $10 \times 3 = 30$ so what is 9×3 ?  If 10 jumps on a number line is 40, what would 9 jumps be? Encourage children to use number lines and concrete resources to be able to visualise.
11 x 10 x plus add 1 more multiple	Children need to continue to practise practically with number lines and concrete resources. Ensure they are able to make the links of adding 1 more multiple e.g $10 \times 3 = 30$ so what is 11×3 ? 
12 x 10 x plus double the multiple	Children need to continue to practise practically with number lines and concrete resources. Ensure they are able to make the links of doubling the multiple to add on. e.g $10 \times 3 = 30$ so what is 12×3 ? 

8 x Double 4 x or 2 x, double it and double it again	Children need to make links between the earlier concepts of doubling, as well as using their knowledge of the 2's and 4 x tables. They need to continue using concrete resources and number lines to support their visual understanding. e.g if $4 \times 3 = 12$ what is 8×3 ? Ask children to consider questions such as; Show 2 different ways to calculate this. 8×3 is 6 less than 10×3 True or false? 8×3 is the same as 4×6. Show me how. 
6 x Double 3x	Children continue to use doubling as a strategy. They also need to continue using using number lines and concrete resources to support their thinking e.g if $3 \times 3 = 9$, what is 6×3? 

7 x

This is the hardest but all of them can be worked out using commutative law expect 7×7
e.g 7×5 is the same as 5×7 .

Children can work out 7×7 though by doing $5 \times$ and $2 \times$ and then adding together.
It is essential that children use concrete resources to learn the $7 \times$ tables due to it's difficulty.

