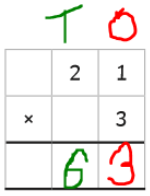
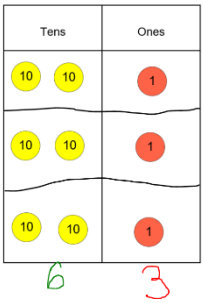
Learning Letter – Maths

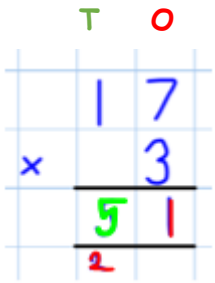
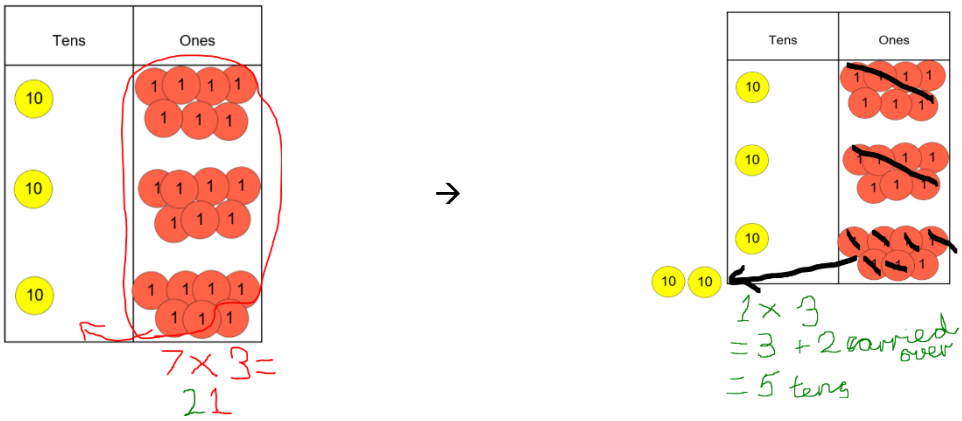
Week beginning 08/06/20

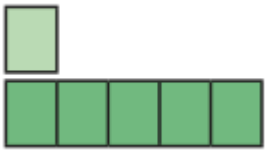
Hi Year 3!

This week's maths topic is **multiplication!** We will be looking at partitioning to multiply and the formal written method of multiplication. Then, we will use those skills to answer problem solving questions!

Happy Home Learning 😊

Lesson	**Learning Outcome and Task**
Lesson 1	**Learning Question: Can you multiply using partitioning?** To multiply using partitioning, follow the steps below: *Partition both numbers *Multiply the tens by the smaller number (the multiplier) *Multiply the ones by the smaller number (the multiplier) *Add the numbers together to reach the total 13 x 2 10 3 10 x 2 = 20 3 x 2 = 6 20 + 6 = 26
Lesson 2	**Learning Question: Can you multiply using the formal written method?** Follow these steps to solve multiplications using the formal written method.  *Write the number sentence vertically in its correct place value column. *Multiply the ones first and write the answer in the correct place value column. *Multiply by the tens and write the answer. You can also use place value grids to help you solve them, for example:  21 x 3 is the same as having the repeated addition of 21 + 21 +21 so you make this on your place value grid. Add up the ones = 3 ones or 3 x 1 = 3. Then, add up the tens = 6 tens or 2 x 3 = 6. This then leaves you with the answer 63.

Lesson 3	**Learning Question: Can you multiply using the formal written method? *carrying over** Follow the steps to success to use the formal written method. Don't forget if you multiply the ones and it has tens, then they must be **carried over** to the correct column and added on after you've multiplied the tens!  *Write the number sentence vertically in its correct place value column. *Multiply the ones first and write the answer in the correct place value column. (7 x 3 =21 → the 1 stays in the ones column, the 2 tens are carried over) *Multiply by the tens and write the answer. (3 x 1 =3) *Don't forget to add the carried digit!! (3 x 1 ten + 2 carried over tens = 5) You can also show this using a place value grid, like below: 
Lesson 4	**Learning Question: Can you solve multiplication problems?** Solve problem solving and reasoning questions using the formal written method. For example: *Use these numbers to solve the problems below by choosing one number from each row.* 34 | 53 | 82 4 | 3 | 8 a) Write the multiplication with the largest answer. b) Write the multiplication with the smallest answer. c) Which multiplication gets you closest to 100? Work systematically through these, for example to find the multiplication closest to 100 you could workout all the possible options of multiplications then compare them to find which is closest or you could round the 2 digit numbers to the nearest tens and work them out mentally to get a rough estimate of which multiplication might get you closest. E.g. 30 x 3, 50 x 3, 30 x 4 which gets you closest to 100? Then, complete the full multiplication to confirm your estimate!

	You can also use your knowledge of number to help you, for example, to find the largest multiplication you know to multiply the largest 2-digit number by the largest 1-digit number. There are also reasoning questions to solve which means you will have to **explain** your answer. E.g. *This person has used the formal written method incorrectly **as/because**...* Or prove your answer by showing a method, the correct answer or a model such as a place value grid or partitioning sums.
Lesson 5	**<u>Learning Question: Can you use multiplication to solve scaling problems?</u>** Use your knowledge of number and your multiplication facts to solve scaling problems. E.g.  *Sophie's line of cars is 7 times shorter than Katie's line of cars.* *Katie's line of cars is 7 times longer than Sophie's line of cars.* You may need to use multiplication facts to help you, for example: 1) How many times bigger is 40 than 5? *40 is **8** times bigger than 5. You know this as 8 x 5 = 40.* 2)A sparrow's wingspan is 5cm, an eagle is 25cm. How much bigger is the eagle's wingspan? *I know that 5 x 5 = 25 so the eagle's wingspan is 5 times greater than the sparrows. Here is a bar model to represent that.* *The boxes on the bar model represent 5cm each so the scale shows 1 box for the sparrow (5cm) compared to the eagles 5 boxes (25cm)*  If you are still stuck, BBC bitesize have a helpful video to show scale in lego models! https://www.bbc.co.uk/bitesize/clips/z8pfgk7

Don't forget you should still be practising your times tables weekly as well! Make sure your 3,4 and 8 are super speedy before moving onto to your 7 and 9 times tables. You can still be using mathletics and purple mash too for any extra work, times tables practise or just for fun!