BRONZE

School name: **MATHS PLANNING YEAR A**

Teacher: **Class:** **Year:** **Term: Spring 1** **Week Commencing: Week 1**

Topic	NC Links: Pupils should be taught to:

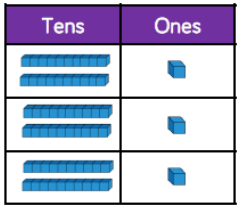
Day	Mental/Oral Starter		Main Lesson				Plenary	Assessment
	Objectives	Activity	Objectives	Teaching	Activities	Key Vocabulary	Activity	
Mon	**L.O. Recall 3x table** **L.O. fluency** **Y3** 70 x 3 = 27 ÷ 3 = 3119+4147= 799-445= **Y4** 456 x 3 = 845÷ 3 = 3119+4147= 799-445=	**L.O. To fill in the missing numbers**	**L.O** **To multiply 2 digits by 1 digit** **Must:** multiply 2 digit x 1 digit with concrete manipulatives **Should:** begin to use formal method. **Could:** spot and correct errors. **Success Criteria**	Teach children to use their knowledge of repeated addition to represent a 2 digit number multiplied by a 1 digit number with concrete manipulatives. They use the formal method alongside the manipulatives. They also apply their knowledge of partitioning to represent and solve calculations. In this small step chn explore multiplication with no exchange first. Year 4 will need extensions: see resources	Use Base 10 to calculate 2 digit x 1 digit by repeated addition. Complete calculations to match place value counters Use place value counters to calculate 2 digit x 1 digit and show formal method alongside. Spot and correct errors **SEN – L.O.**	Multiply Multiple Product	How does addition link to multiplication?	**Exceeding ARE:** **At ARE:** **Below ARE:** **SEND** **PPG** **EAL**

There are 21 coloured balls on a snooker table.
How many coloured balls are there on 3 snooker tables?

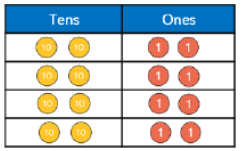
Use Base 10 to calculate:

There are 21 coloured balls on a snooker table.
How many coloured balls are there on 3 snooker tables?

Use Base 10 to calculate:
21 × 4 and 33 × 3



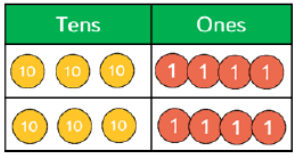
Complete the calculations to match the place value counters.



□ + □ + □ + □ = □

□ × □ = □

Annie uses place value counters to work out 34 × 2



	T	O
	3	4
×		2
	6	8

Use Annie's method to solve:
23 × 3
32 × 3
42 × 2

Alex completes the calculation:

43 × 2

Alex completes the calculation:

43 × 2

Can you spot her mistake?

	T	O
	4	3
×		2
		6
+		8
	1	4

Teddy completes the same calculation as Alex.
Can you spot and explain his mistake?

	T	O
	4	3
×		2
8	0	6

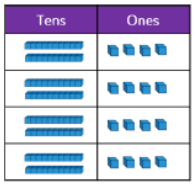
Dexter says,

4 × 21 = 2 × 42

Is Dexter correct?

Day	Mental/Oral Starter		Main Lesson				Plenary	Assessment
	Objectives	**Activity**	**Objectives**	**Teaching**	**Activities**	**Key Vocabulary**	**Activity**	
Tues	**L.O. Recall 3x table** **L.O. fluency** **Y3** 40 x 3 = 33 ÷ 3 = 5147+3581= 800-257= **Y4** 146 x 3 = 741÷ 3 = 5147+3581= 800-257=	**L.O. Always, sometimes, never**	**L.O** **To multiply 2 digits by 1 digit** **Must:** multiply 2 digit x 1 digit with concrete manipulatives **Should:** begin to use formal method. **Could:** spot and correct errors. **Success Criteria**	Teach chn to use their knowledge of repeated addition to represent a 2 digit number multiplied by a 1 digit number with concrete manipulatives. They use the formal method alongside the manipulatives. In this small step chn explore multiplication with exchanges Year 4 will need extensions: see resources	Use Base 10 to calculate 2 digit x 1 digit with one exchange by repeated addition Use Base 10 to calculate 2 digit x 1 digit with two exchanges Always, sometimes, never Spot and rectify errors **SEN – L.O.**	Multiply Multiple Product	What happens when we have 10 or more ones in a column? How do we record an exchange?	**Exceeding ARE:** **At ARE:** **Below ARE:** **SEND** **PPG** **EAL**

Jack uses Base 10 to calculate 24 × 4



	T	O
	2	4
×		4
	9	6

1

Use Jack's method to solve:
13 × 4
23 × 4
26 × 3

Amir uses place value counters to calculate 16 × 4

	T	O
	1	6
×		4
	6	4

2

Use Amir's method to solve:
16 × 6
17 × 5
28 × 3

Amir then calculates 5 × 34

	T	O
	3	4
×		5
1	7	0

1 2

Use Amir's method to solve:
36 × 6
48 × 4

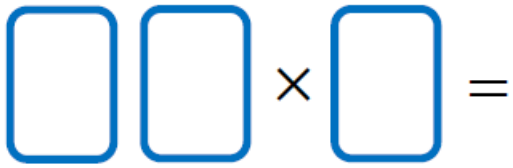
Always, Sometimes, Never?

A two-digit number multiplied by a one-digit number has a two-digit product.

Explain the mistake.

H	T	O
	2	7
×		3
6	2	1

How close can you get to 100?
Use each digit card once in the multiplication.



Day	Mental/Oral Starter		Main Lesson				Plenary	Assessment
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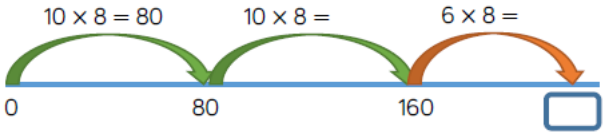
Wed	**L.O. Recall 3x table** **L.O. fluency** **Y3** 56 x 3 = 36 ÷ 3 = 2589+979= 500-369= **Y4** 509 x 3 = 607÷ 3 = 2589+979= 500-369=	**L.O. To fill in a web**	**L,O to know efficient methods to multiply,** **Must:** understand when it is more efficient to do a mental calculation. **Should:** multiply using different methods **Could:** spot and correct errors. **Success Criteria**	Teach chn a variety of informal written methods of multiplication. Emphasise when it is more appropriate to use mental methods of calculation	Use partitioning and a number line to multiply. Use Base 10 and part/whole methods to multiply. Give chn different calculations and ask them to decide which methods are efficient. Spot and rectify errors **SEN – L.O.**	Partition Multiply	Can you partition the number in different ways? Could you find a more efficient method?	**Exceeding ARE:** **At ARE:** **Below ARE:** **SEND** **PPG** **EAL**

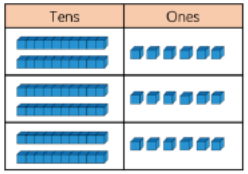
There are 8 classes in a school.
Each class has 26 children.
How many children are there altogether?
Complete the number line to solve the problem.

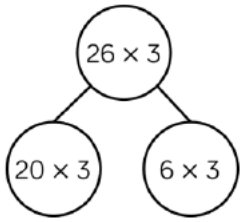


Use this method to work out the multiplications.

16 × 7 34 × 6 27 × 4

Rosie uses Base 10 and a part-whole model to calculate 26 × 3
Complete Rosie's calculations.





Use Rosie's method to work out:
36 × 3
24 × 6
45 × 4

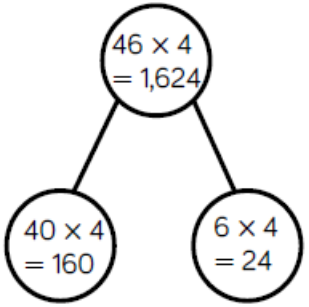
Here are 6 multiplications.

43 × 5	54 × 6	38 × 6
33 × 2	19 × 7	84 × 5

Which of the multiplications would you calculate mentally?
Which of the multiplications would you use a written method for?

Explain your choices to a partner.
Did your partner choose the same methods as you?

Ron is calculating 46 multiplied by 4 using the part-whole model.



Can you explain Ron's mistake?

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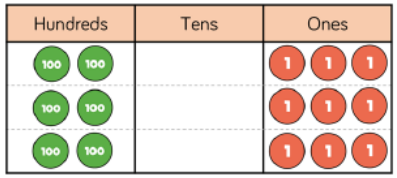
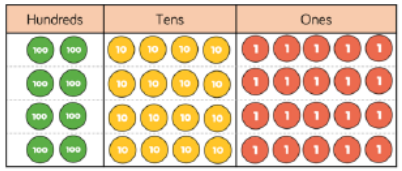
Thurs	**L.O. Recall 3x table** **L.O. fluency** **Y3** 79 x 3 = 18 ÷ 3 = 5140+889= 650-269= **Y4** 449 x 3 = 921÷ 3 = 5140+889= 650-269=	**L.O. To solve a multiplication pyramid**	**L.O. To multiply 3 digits by 1 digit** **Must:** multiply 3 digits by 1 digit using counters **Should:** multiply 3 digits by 1 digit using formal written method **Could:** solve problems **Success Criteria**	Teach children to build on previous steps to represent a three-digit number multiplied by a one-digit number with concrete manipulatives. Teachers should be aware of misconceptions arising from 0 in the tens or ones column. Children continue to exchange groups of ten ones for tens and record this in a written method.	Task that link repeated addition with counters to formal written method. Repeat with an exchange Spot and rectify errors Solve word problems **SEN – L.O.**	Multiply Lots of Exchange	How is multiplying a three digit number by one digit similar to multiplying a two digit number by one digit?	**Exceeding ARE:** **At ARE:** **Below ARE:** **SEND** **PPG** **EAL**

Complete the calculation.



	H	T	O
	2	0	3
×			3

A school has 4 house teams.
There are 245 children in each house team.
How many children are there altogether?



	H	T	O
	2	4	5
×			4

Write the multiplication represented by the counters and calculate the answer using the formal written method.

Spot the mistake

Alex and Dexter have both completed the same multiplication.

Alex

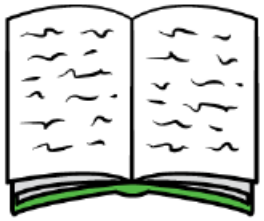
	H	T	O
	2	3	4
×			6
1	2	0	4
	2	2	

Dexter

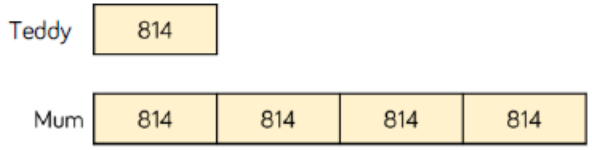
	H	T	O
	2	3	4
×			6
1	4	0	4
	2	2	

Who has the correct answer?
What mistake has been made by one of the children?

Teddy and his mum were having a reading competition.
In one month, Teddy read 814 pages.



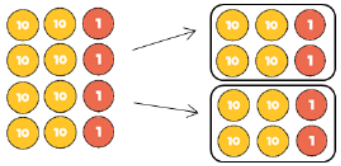
His mum read 4 times as many pages as Teddy.
How many pages did they read altogether?
How many fewer pages did Teddy read?
Use the bar model to help.



Day	Mental/Oral Starter		Main Lesson				Plenary	Assessment
	Objectives	Activity	Objectives	Teaching	Activities	Key Vocabulary	Activity	
Fri	**L.O. Recall 6x table** **L.O. fluency** **Y3** 192 x 6 = 72 ÷ 6 = 3737+1598= 789-123= **Y4** 192 x 6 = 720 ÷ 6 = 3737+1598= 789-123=	**L.O. To join the 6 x facts**	**L.O. To divide 2 digits by 1 digit** **Must:** partition into tens and ones **Should:** divide using concrete manipulatives **Could:** begin to divide using bus stop **Success Criteria**	Teach children to divide 2-digit numbers by a 1-digit number by partitioning into tens and ones and sharing into equal groups. They divide numbers that do not involve exchange or remainders. It is important that children divide the tens first and then the ones. Demonstrate bus stop alongside Y4 will need separate calculations and word problems	Use place value counters to divide 2 digits by 1 digit with no exchange Use part/whole model to divide 2 digits by 1 digit with no exchange **SEN – L.O.**	Share Group Divide	How can we partition the number? How many 10s? How many ones?	**Exceeding ARE:** **At ARE:** **Below ARE:** **SEND** **PPG** **EAL**

How can we partition the number? How many 10s? How many ones?

Ron uses place value counters to solve 84 ÷ 2



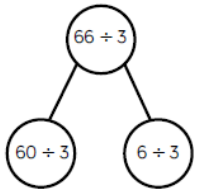
I made 84 using place value counters and divided them between 2 equal groups.

Use Ron's method to calculate:

84 ÷ 4 66 ÷ 2 66 ÷ 3

Eva uses a place value grid and part-whole model to solve 66÷ 3

Tens	Ones
10 10	1 1
10 10	1 1
10 10	1 1



Use Eva's method to calculate:

69 ÷ 3 96 ÷ 3 86 ÷ 2

Teddy answers the question 44 ÷ 4 using place value counters.

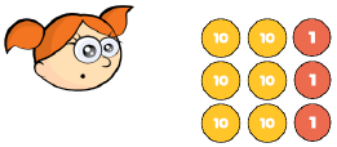
Tens	Ones
10 10	1 1
10 10	1 1

Is he correct?
Explain your reasoning.

Dora thinks that 88 sweets can be shared equally between eight people.

Is she correct?

Alex uses place value counters to help her calculate 63 ÷ 3



Tens	Ones
10	10 1
10	10 1
10	10 1

She gets an answer of 12
Is she correct?