

# *Mastery Maths Curriculum at Ravensdale Junior School*

30.9.2022



# What should children be doing at home for maths?



Login required  
from teacher

FREE apps to be  
downloaded from  
Apple Store or Google Play  
on phones and tablets

## Homework

Two worksheets from the 'PLACE VALUE BLOCKS: UP TO THOUSANDS' series are shown. The left worksheet is 'SHEET 2' and the right is 'SHEET 1'. Both worksheets feature a grid of place value blocks (cubes, rods, and units) and a list of numbers to be matched. The numbers are: 2130, 3040, 1536, 1124, 660, and 1306. The worksheets are from the website [www.maths-salamanders.com](http://www.maths-salamanders.com).

A screenshot of the '1-minute MATHS' app interface. The app features a green cartoon turtle character on the left. In the center, there is a list of math operations with corresponding icons: Subitising (dots), Addition (+), Subtraction (-), Multiplication (X), and Division (÷). On the right, a hand is holding a smartphone displaying a calculator app with the equation  $10 \times 10 = 100$ . The background is blue with stars and confetti.

# What is Mastery Maths?

- Based on the belief: ALL children can achieve in maths.
- Whole class is taught together but...
  - Extra support is given to children difficult
  - Challenging questioning are giving to those who are flying!
- Concepts are built in small, logical steps → mathematical models and images

# What do our lessons look like?



## Why this / Why now?

Although the basic structure of a lesson should remain the same, the amount of time spent in each section should be fluid based on the needs of the children.

Review	Assess	Model	Guide	Independent
Review	Assess: Children understand quickly	Less time can be spent modelling	Guide	More time can be spent on independent work hopefully moving toward greater depth.
Review	Assess: Children don't understand	More time can be spent modelling		More time guiding the children Less time spent on independent work



# Skills Check

## Today's Tough Ten

1	$80 \div 10 =$
2	$= 10 \times 4$
3	$57 - 40 =$
4	$36 + 23 =$
5	$67 - 35 =$
6	$45 + 26 =$
7	$90 - 30 =$
8	$7 \times 5 =$
9	$= \frac{1}{3} \text{ of } 9$
10	$40 \div 10 =$

Year 3 example

## Today's Tough Ten

1	$6000 \times 6 =$
2	$210 \times 1 =$
3	$\frac{1}{4} + \frac{1}{2} =$
4	$42 \div 7 =$
5	$4200 \div 10 =$
6	$5403 \times 5 =$
7	$900 - 236 =$
8	$613 + 9 + 5318 =$
9	$38 \times 1000 =$
10	$1 - 0.3 =$

Year 6 example

## Year 5 example - recap quadrant

### Skills Check



#### Last Lesson

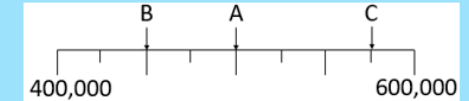
Put the numbers in ascending order.  
101,010 110,001 100,110 101,100

#### Last Fortnight

Write the number 345,207 in words.

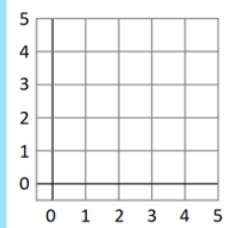
#### Last Week

What numbers are at point A, B and C?



#### Last Summer

Draw the grid and plot the points (1, 2), (3, 2) and (2, 4).



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## Times Tables Practice

1x table	2x table	3x table	4x table	5x table	6x table
1 × 1 = 1	1 × 2 = 2	1 × 3 = 3	1 × 4 = 4	1 × 5 = 5	1 × 6 = 6
2 × 1 = 2	2 × 2 = 4	2 × 3 = 6	2 × 4 = 8	2 × 5 = 10	2 × 6 = 12
3 × 1 = 3	3 × 2 = 6	3 × 3 = 9	3 × 4 = 12	3 × 5 = 15	3 × 6 = 18
4 × 1 = 4	4 × 2 = 8	4 × 3 = 12	4 × 4 = 16	4 × 5 = 20	4 × 6 = 24
5 × 1 = 5	5 × 2 = 10	5 × 3 = 15	5 × 4 = 20	5 × 5 = 25	5 × 6 = 30
6 × 1 = 6	6 × 2 = 12	6 × 3 = 18	6 × 4 = 24	6 × 5 = 30	6 × 6 = 36
7 × 1 = 7	7 × 2 = 14	7 × 3 = 21	7 × 4 = 28	7 × 5 = 35	7 × 6 = 42
8 × 1 = 8	8 × 2 = 16	8 × 3 = 24	8 × 4 = 32	8 × 5 = 40	8 × 6 = 48
9 × 1 = 9	9 × 2 = 18	9 × 3 = 27	9 × 4 = 36	9 × 5 = 45	9 × 6 = 54
10 × 1 = 10	10 × 2 = 20	10 × 3 = 30	10 × 4 = 40	10 × 5 = 50	10 × 6 = 60
11 × 1 = 11	11 × 2 = 22	11 × 3 = 33	11 × 4 = 44	11 × 5 = 55	11 × 6 = 66
12 × 1 = 12	12 × 2 = 24	12 × 3 = 36	12 × 4 = 48	12 × 5 = 60	12 × 6 = 72
7x table	8x table	9x table	10x table	11x table	12x table
1 × 7 = 7	1 × 8 = 8	1 × 9 = 9	1 × 10 = 10	1 × 11 = 11	1 × 12 = 12
2 × 7 = 14	2 × 8 = 16	2 × 9 = 18	2 × 10 = 20	2 × 11 = 22	2 × 12 = 24
3 × 7 = 21	3 × 8 = 24	3 × 9 = 27	3 × 10 = 30	3 × 11 = 33	3 × 12 = 36
4 × 7 = 28	4 × 8 = 32	4 × 9 = 36	4 × 10 = 40	4 × 11 = 44	4 × 12 = 48
5 × 7 = 35	5 × 8 = 40	5 × 9 = 45	5 × 10 = 50	5 × 11 = 55	5 × 12 = 60
6 × 7 = 42	6 × 8 = 48	6 × 9 = 54	6 × 10 = 60	6 × 11 = 66	6 × 12 = 72
7 × 7 = 49	7 × 8 = 56	7 × 9 = 63	7 × 10 = 70	7 × 11 = 77	7 × 12 = 84
8 × 7 = 56	8 × 8 = 64	8 × 9 = 72	8 × 10 = 80	8 × 11 = 88	8 × 12 = 96
9 × 7 = 63	9 × 8 = 72	9 × 9 = 81	9 × 10 = 90	9 × 11 = 99	9 × 12 = 108
10 × 7 = 70	10 × 8 = 80	10 × 9 = 90	10 × 10 = 100	10 × 11 = 110	10 × 12 = 120
11 × 7 = 77	11 × 8 = 88	11 × 9 = 99	11 × 10 = 110	11 × 11 = 121	11 × 12 = 132
12 × 7 = 84	12 × 8 = 96	12 × 9 = 108	12 × 10 = 120	12 × 11 = 132	12 × 12 = 144

# Review - checking a skill they will need for the lesson

Review



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1) What multiple of **ten** is either side of:

a) 84

b) 409

2) What multiple of **one hundred** is either side of:

a) 631

b) 1746

3) What multiple of **one thousand** is either side of:

a) 2704

b) 9603





Now, for each question, circle the multiple that the original number is closer to

Y5 Objective - to be able to round to the nearest 10, 100, 1000

# Assess - how well do the class know the concept already?


Assess




  
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8,317 people attend a pop concert.

Round the number of people at the concert to the nearest 10  
Round the number of people at the concert to the nearest 100  
Round the number of people at the concert to the nearest 1,000

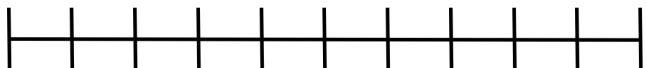


 Write down your method for working out the answers to these.  
Compare these with your partner.

## Y5 Objective - to be able to round to the nearest 10, 100, 1000

# Model - teaching the concept

Round 2,755 to the nearest 10

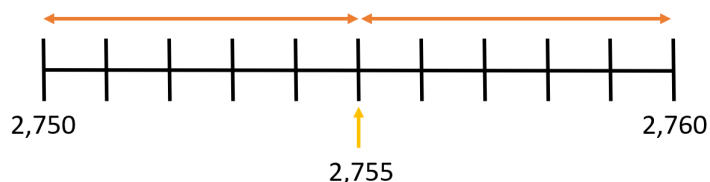


The previous multiple of 10 is \_\_\_\_\_

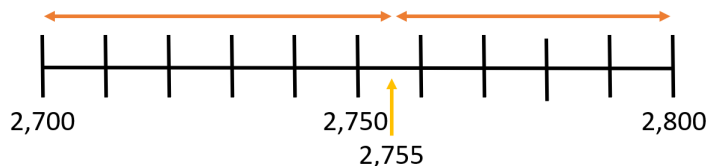
The next multiple of 10 is \_\_\_\_\_

\_\_\_\_\_ rounded to the nearest 10 is \_\_\_\_\_

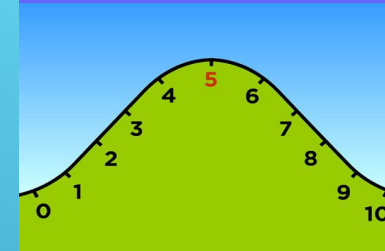
Round 2,755 to the nearest 10 **2,760**



Round 2,755 to the nearest 100 **2,800**



## ROUNDING NUMBERS



Rounding Numbers

5 or more, **let it soar.** ↑

4 or less, **let it rest.** ↓

Round 2,755 to the nearest 1,000



The previous multiple of 1,000 is \_\_\_\_\_

The next multiple of 1,000 is \_\_\_\_\_

2,755 is closer to \_\_\_\_\_ than \_\_\_\_\_

2,755 rounded to the nearest 1,000 is \_\_\_\_\_

Y5 Objective - to be able to round to the nearest 10, 100, 1000



# Guided - chance to check and practice!

Guided



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*Think, pair, share in pairs*

1)

31,409 people attend a football match.

Round the number of people at the match to the nearest 100

Round the number of people at the match to the nearest 1,000



2)

Eva runs every night for a week.

Altogether she runs 28,650 m.

Round the distance she runs to the nearest 100 m.

Round the distance she runs to the nearest kilometre.



Complete and say these sentences to your partner:

\_\_\_\_\_ is closer to than \_\_\_\_\_

So \_\_\_\_\_ rounded to the nearest 10/100/1,000 is \_\_\_\_\_



1km = 1000m

Y5 Objective - to be able to round to the nearest 10, 100, 1000


# Independent - support and challenge given!


-All children to start on green

-Apparatus and adult support for those finding it difficult

-Variety of tasks practising skill, increasing in challenge

## Independent





• Write down the value of each number marked by an arrow.  
• Round the number to the nearest 100.  
Remember: if the number is exactly half-way, it rounds up to the next 100.

**Example**

450 to the nearest 100 is 500      630 to the nearest 100 is 600

370 to the nearest 100 is \_\_\_\_ to the nearest 100 is \_\_\_\_

370 to the nearest 100 is \_\_\_\_ to the nearest 100 is \_\_\_\_

Write out the original number and its rounded answer e.g. 3682 → 3680  
Only complete the top section.

**B**

Round to the nearest:

10	100	1000
1 4628	7 3818	13 21 930
2 7173	8 47 072	14 53 285
3 25 385	9 15 360	15 15 817
4 38 706	10 30 249	16 169 542

Complete the table.

Number	3,561	9,730	21,075	903
Rounded to the nearest 10				
Rounded to the nearest 100				
Rounded to the nearest 1,000				

Round these numbers to the nearest 100:

1,512 →  
1,532 →  
1,542 →

What do you notice? *Stem sentence:*  
*I have noticed that...*

I'm thinking of an integer that is 370 when rounded to the nearest 100.

Complete the sentences to describe Eva's number.

It cannot be less than \_\_\_\_

It cannot be more than \_\_\_\_

It must be between \_\_\_\_ and \_\_\_\_

It might be \_\_\_\_

1 9 9 1

a) Mo makes a 4-digit number using the digit cards.  
His number rounds to 9,100 to the nearest 100.  
What number does Mo make? \_\_\_\_

b) Kim makes a different 4-digit number using the digit cards.  
Her number rounds to 10,000 to the nearest 1,000.  
What does Kim's number round to, to the nearest 10? \_\_\_\_

37 rounded to the nearest 100 is zero.

Is Dexter correct? \_\_\_\_

Draw a number line to represent your answer.

Y5 Objective - to be able to round to the nearest 10, 100, 1000

*Any questions?*

Several thin, parallel white lines of varying lengths are positioned in the bottom right corner of the slide, angled diagonally upwards from left to right.