Term 1 Home Learning Tasks

Choose a task to complete once a week. Make sure you share on Google Classroom and upload any pictures or learning.



Reading. Read an adventure story and write a review to share in your classes book corner. Can you reccomend a book? Is there a book you have not enjoyed over the summer, give reasons why?	Spellings. Create a game using the year five/six spelling lists.Think of a game you enjoy could you adapt it to help with your spellings. Can we play it in class with your Kagan team.	Geography. Where did you and your family go travel this summer? Did you travel to another Biome. Can you create a Diorama of your visit. If you had a staycation what was the weather like. Share a diary of your weather.
History. As we will be deepening our knowledge on WW1 can you research in your family and ask if there are any great stories from your ancestors. Do you have any mementos or brave stories told from members of your family or friends.	PE How can we stay healthy? How can we improve our fitness? Can you set yourself a challenge and stick to it. The teachers are all trying to drink more water at school and improve their step count, can you help them?	Maths Bake with your family. What maths is involved with baking. Share a favourite recipe and all of the fantastic maths skills you have used. We have included a couple of maths challenges for you to have a go at, linking to place value and the four operations.
Year six. How can you make a difference in year six? What message would you like to share? Can you report on the change you would make? You are a reporter for the day, what is important to you? How can you influence the younger years?	English. The Arrival by Shaun Tan. We are looking at this book in Guided Reading this term. Can you create a book that has important messages but is only made of pictures? What are your messages to the world please explain.	BLP muscle. I am a survivor. What situation have you survived, has it been a Junny situation, or has it been a situation that has made you stronger. Write a recount of you surviving. What BLP muscles have you used?
Challenge. Challenge yourself and learn a new skill. What have you always wanted to do? Is it a new sport, create a piece of art in the style of someone or improve at something you already do. Can you create a blog sharing your ideas and inspire others.	Free choice. What do you love? Take some time to look after your mental health and do something you really enjoy. Tell us about it. You could send a video to GC.	Computing. PowerPoint challenge. What do you love doing in your spare time? How can you teach someone a new skill? Can you influence others with your passion. Share a PP online and teach us something new about you.



Mixed 4 Operations

Math Practice Worksheet

95	13)299	76	54
+ 34		<u>- 21</u>	<u>× 8</u>
13) 1,157	33 + 18	12 × 52	4)368
57	70	64	7)91
× 64	<u>× 4</u>	<u>- 46</u>	
11	66	19	24
- 10	+ 99	- 16	+ 18



Mixed 4 Operations

Math Practice Worksheet

95 + 34 129	2 <u>3</u> 13)299	76 <u>- 21</u> 55	54 <u>× 8</u> 432
<mark>89</mark> 13)1,157	33 + 18 51	12 × 52 624	<mark>92</mark> 4) 368
57	70	64	7)91
<u>× 64</u>	× 4	<u>- 46</u>	
<mark>3,648</mark>	280	<u>18</u>	
11	66	19	24
<u>- 10</u>	+ 99	<u>- 16</u>	+ 18
1	165	3	42



Year 6 Booster Booklet - Number and Place Value

My intention for these 'Year 6 Booster Booklets' is to create a set of resources which can be used with small groups of children, either by a TA or teacher, and which will require minimal preparation time on your part (maybe an occasional bit of laminating). They are aimed at the children who could achieve the expected standard with a little extra support.

I would recommend you begin each strand by assessing your children and use the results to determine which sessions are required by which children.

There are two assessments for each strand of the Y6 curriculum. They are all free to download. The assessments for Y6 Number and Place Value are here:

http://mathsframe.co.uk/en/resources/category/351/Year_6_Number_place_value_and_rounding

Alternatively, you can browse all assessments and worksheets (there are more than 130 designed around the Year 6 curriculum) here:

http://mathsframe.co.uk/en/resources/worksheets

use the drop down boxes to help you navigate. Please note there are also 2 assessments for each Year 5 strand (and all other year groups) and these might be a more appropriate place to start when looking for gaps with some of your children.

The following sessions are available for this strand:

- NPV1 Reading and writing numbers up to 10 million page 2 to page 5
- NPV2 Understanding the value of numbers up to 10 million page 6 to page 9
- NPV3 Understanding and using negative numbers page 10 to page 12
- NPV4 Rounding whole numbers page 13 to page 15

Each session will involve suggested activities, key questions, worksheets and interactive games to play. Some of the games may require a subscription to mathsframe.

Feedback from teachers is always welcome - Ted Burch 09/01/17 email - support@mathsframe.co.uk twitter - @mathsframe facebook - www.facebook.com/mathsframe



NPV1 - Reading and writing numbers up to 10 million

- Write the number 4,159,237 on the place value frame.
- Discuss the value of the digits e.g. what is the digit 5 worth? (fifty thousand). Discuss the position of the commas (separates the millions and the thousands)
- Children then pick a word card, say it, write it on the frame and then write it in the box underneath including commas in the correct places.

The key here is getting the children to think about using zeros as place holders in the correct places. Keep practising until they seem confident and then try without the place value frame. If mistakes are made ask them to use the place value frame to find their mistake.

Games to practise the skill

http://mathsframe.co.uk/en/resources/resource/274/Reading_Numbers_Crystal_Crash

(search for 'mathsframe 274') - choose Y6 Reading Numbers to ten million



Independent activity

Reading numbers to ten million worksheet (page 5). If there are any mistakes get children to correct them using the place value frame to help.

	page 5
J	millions
	hundred thousands
	ten thousands
7	thousands
	hundreds
	tens
	ones





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four million, twenty thousand and four

eight million, four hundred and three thousand and two

seventy-two thousand, one hundred and eight

four hundred and five thousand and twenty-five

one million and thirty-seven

seven million, thirty-two thousand, four hundred and one

eighty-two thousand and eighty-two

four million and fourteen

nine million, four thousand and fifty-eight

eight million, four hundred and twelve thousand

three million, four hundred and one thousand, one hundred and four

six hundred and thirty-five thousand and twelve

half a million

seventy thousand and seven

eight million and five

one million, one hundred and eleven

five million, two-hundred and thirty-seven thousand, six

ninety thousand and nineteen

four hundred and twenty-nine thousand, six hundred and seventy-two



L.O. To read and write numbers up to 10,000,000 and determine the value of each digit

Write in numerals:

three million, two hundred and eight thousand and thirty-eight

nine million, three hundred and eight thousand, six hundred and twenty

seven million and two

eight million, four hundred and twelve thousand, two hundred and fifty-six

ninety-two thousand and fifty-eight

Write in words the value of the underlined digit:

4, <u>7</u> 28,006	seven hundred thousand
1,0 <u>8</u> 9,056	
4.907.146	
2 340 094	
2,070,0 <u>3</u> 7	



NPV2 - Understanding the value of numbers up to 10 million

- Ask the children to write the number that is **one thousand less than one million** on their whiteboards. If they struggle introduce the column subtraction frame (p7) and model using column subtraction to get the answer, when you have the answer discuss that one million is one thousand thousands, so one thousand less will be 999 thousands.
- Repeat with similar place value questions e.g. 100 less than 4 million, 10 less than 5 million, 700 less than 700,000, 40,000 less than 4 million . Encourage children to do the calculations mentally and then check using the column subtraction frame. Move on when they have the hang of it.
- Introduce the number lines (p8). Discuss the value of the divisions on each scale. e.g. scale A
 there are 10 divisions from 0 to 1 million, so each division is worth 100,000, Scale B
 each division is worth 10,000 etc
- Write the following number on a whiteboard and ask children to draw an arrow on both Scale A and Scale B to show where it would go:

382,136

Discuss their choices and compare for accuracy. Encourage discussions that involve thinking about the position in relation to the divisions e.g. it is closer to 400,000 than 300,000 on scale A, it is closer to 380,000 than 390,000 on the scale B etc.

- Repeat with 7,480,053 on Scale C and D, again focus on children justifying their decisions using their understanding of place value
- Repeat with various numbers (e.g. 305,792, 7,296,095 etc.), perhaps ask children to suggest numbers that would go on two scales.

Independent activity

Placing numbers up to 10 million on a number line worksheet (page 9). Support may be needed thinking about how to find the 'half way' numbers on the second section.



	millions	hundred thousands	ten thousands	thousands	nunareas	Tens	ones
I							







Estimate the numbers on the number line.



Draw an arrow on the number line to show the approximate position of these numbers.





NPV3 - Understanding and using negative numbers

Go to http://mathsframe.co.uk/en/resources/resource/52/temperature word problems

or search 'Mathsframe 52' and choose 'Find the difference between negative and positive temperatures'



Model drawing a number line and using it as per the game to find the difference between a negative and positive temperature by jumping to and from zero. Allow the game to generate the questions and children to solve on their whiteboards until they are all secure.

• Write the following sequence on a whiteboard:

36, 26, 16, 6 ...

ask the children which number comes next. Often they will make the mistake of thinking it is -6

model on a number line starting at 6, then jumping back to zero, how far have I jumped? (6), how much more do I need to jump to have jumped 10? (4), jump back to -4



• Ask the children to find the next number in these sequences:

47, 37, 27, 17, 7

34, 26, 18, 10, 2

by identifying the amount being subtracted and then jumping through zero on a number line as modelled.



NPV3 - Understanding and using negative numbers (cont.)

Independent activity

'Use negative numbers in context, and calculate intervals across zero' worksheet (page 12).

Games to practise the skill

http://mathsframe.co.uk/en/resources/resource/265/Estimate Number Line

or search for 'Mathsframe 265'



Choose the -50 to 50 number line and 'play for points'. I think this game is really useful as it not only encourages children to think of the value of negative numbers, it also then asks them to calculate using negative numbers. Above my initial estimate of -12 was out by 3, you can then get the children to work out what numbers are 3 away from -12 (-15 and -9) and then use the divisions to decide which it is. (This game requires a subscription)

More games and worksheets involving negative numbers are here:

http://mathsframe.co.uk/en/resources/category/354/

or search for 'Mathsframe category 354'

L.O. Use negative numbers in context, and calculate intervals across zero

To calculate the difference between a negative and positive number we can jump on a number line from the negative number to zero, and then from zero to the positive number.



Felix is finding the difference between -6 and 3. He has drawn a number line to help him. Label the jumps above.

The difference between -6 and 3 is

The table below shows the temperatures of different cities on one day in January.

[Loxley	Londo	on Mos	cow Ne	w York	Sydney	Paris	Cape Town	Toronto
	-2 °C	5 °C	-8	°c	1 °C	23 °C	S°C	17°C	-12 °C
		•	·	•					
W	hat was t	he differer	nce in tem	perature b	etween	Loxley and	London?		
Hc	w much	warmer w	as Paris th	an Toron	to?				
W	hat was t	he differer	nce in tem	perature b	etween	Moscow ar	d Cape To	wn?	
Ho	w much	warmer w	as the war	mest city	than the	coldest city	/?	r	
Th	The next day the temperature in London fell 12°C. What was the new temperature?								
Th	e next da	ay the tem	perature ir	n Toronto	rose 10°	°C. What wa	as the new	temperature?	,
Ci	cle two r	numbers w	/ith a differ	ence of 6					
		2	-2		5	-:	5	3	-1
С	ontinue tł	ne sequen	ce below						
	1)	07	22	17	12	7			
	I)	۲, ۲,			۱۷,		<u> </u>	,	
	2)	54,	34,	14, L		,			
	3)	310,	220,	130,	40,		_), [
1	-								



NPV4 - Rounding whole numbers

- Count together in multiples of 10 from zero to 100 (e.g. 0, 10, 20...)
- Count together in multiples of 10 from 400 (e.g. 400, 410, 420 ...) explain that these numbers are also multiples of 10. (children often make mistakes when rounding because they confuse 'multiples of 10' with the number in the tens column)
- Write the number 373 on a whiteboard. Which multiple of 10 comes before 373? (A 370), which multiple of 10 comes after 373 (A 380)
- Show the laminated number line (or draw your own on a whiteboard) and label the ends 370 and 380. Ask a child to draw an arrow to show the position of 373. Explain that 373 rounded to the nearest 10 rounds to 370 because it is closer
- Write 426 on a whiteboard. Ask children to label their number lines with the multiple of 10 that comes before and after 426 (420 and 430), draw an arrow to show the position of 426 and then circle the multiple of 10 it rounds to (430).
- Repeat with different 3 digit number, include a multiple of 5 (e.g. 715) so you can discuss that numbers in the middle always round up
- Also include a number such as 804, so the children see that 800 is also a multiple of 10, as this can sometimes confuse.
- When secure move on to rounding 4 digit numbers to the nearest 100, by labelling multiples of 100 on both ends, then 5 digit number to the nearest 1000 etc.

Games to practise the skill





Search for 'mathsframe 53'

or



Independent activity

'Round any number to the nearest 10, 100 or 1000' worksheet (page 15). Encourage children to use the number line if needed.

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page 14

Rounding numbers

L.O. Round any number to the nearest 10, 100 or 1000

1) Circle all the numbers which give **40** when **rounded** to the **nearest 10**

32	46	38	44	14	49
				••	

2) Complete the table to show the numbers rounded to the nearest 100.

	Rounded to the nearest 100
148	
1480	
354	
3540	

3) Round 3454



4) Zac is thinking of a whole number.

When he **rounds** his number to the **nearest 10** he gets **250**. When he **rounds** his number to the **nearest 100** he gets **200**.

What could his number be? List all possible numbers.

5) What is the **largest** whole number which **rounded** to the **nearest 1000** gives **4000**?

