

Year 3 – Autumn 1

Mental/ Oral focus		Weekly arithmetic focus – Matched to strand where possible						
<ul style="list-style-type: none"> Counting 4s, 8s, 50s and 100 10s more/less, 100 more/less Partitioning 3 digit numbers Mental addition and subtraction 		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
		Missing Number Statements (review)	Autumn Test 2	Addition of two two-digit numbers (review)	Autumn Test 2	Subtraction of two two-digit numbers (review)	Autumn Test 3	Finding two and three quarters of an amount (review)
KPIs/PIs	Vocabulary	Learning journey				Big Problem		

- **KPIs**
- 3.1 I can count from 0 in multiples of 4, 8, 50 and 100.
- 3.4 I can find 10 or 100 more or less than a given number.
- 3.5 I can recognise the place value of each digit in a 3-digit number.
- 3.7 I can solve number problems and practical problems using above.

PIs

- 3.2 I can compare and order numbers up to 1,000.
- 3.3 I can read and write numbers to 1,000 in numerals and words.

ones
tens, hundreds
digit
one-, two- or three-digit number
place, place value
stands for, represents
exchange
the same number as, as many as
more, larger, bigger, greater
fewer, smaller, less
fewest, smallest, least
most, biggest, largest, greatest
one more, ten more, one hundred more
one less, ten less, one hundred less
equal to
compare
order
size
first, second, third ...
twentieth
twenty-first, twenty-second ...
last, last but one
before, after
next
between
halfway between
above, below

Recapping Year 2 place value knowledge linking to KPI 2.1, 2.3 and 2.6, and PI 2.2, 2.4 and 2.5.

Conceptual – Carousel of activities around counting on in multiples and place value.

1. Counting on in 4s and 8s using marked number lines and groups of cubes/counters.
2. Place value – showing 3 digit numbers with dienes equipment and digit cards.
3. Recap place value of 2 digit numbers – by drawing tens and ones, and representing numbers like $69 = 60 + 9$
4. On empty number lines and partially filled, children to write on multiples of 50 and 100.
5. Flip over place value cards to show adding multiples of 10 and 100.

Topic / Skill: Counting in steps of 2,3,5, and 10s (Recap lesson)

Fluency - Number sequences including where the first number in the timestable isn't given. For example, 20, 25, —, —, —
Number lines with some intervals missing – Children to fill in the gaps.
Give them parts of a hundred square. Circle given multiples.

Reasoning- Convince me, If I count in 2s, I will land on 178.

Always, Sometimes, Never When I jump on in tens, the ones stay the same.

Problem Solving – Link to a money focus – counting coins in multiples.

Frank has 6 5p coins and 7 ten pence pieces. How much does he have in total?

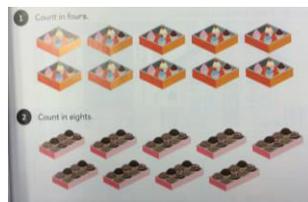
Kelly has a jar of 2ps. She needs 50p to buy a toy. She currently has 8 two pence pieces. How many more 2ps does she need?

Topic / Skill: Counting in steps of 4 and 8.

Conceptual -

1. What do you notice about numbers in the 4 and 8 times tables
Look for a song to teach at this point.

Fluency – Number sequences – 4 and 8 times table. Table showing times tables facts and children to match them.
Visual to support Blues:



Reasoning – Venn diagram – which numbers when counting in 4s and 8s, will go in the middle.

If I count in 4s and 8s, I will always land on 16. Convince me. Are there any other examples like this?

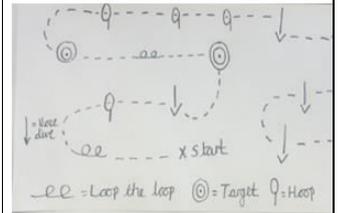
Problem Solving- Baskets hold 4 eggs. How many eggs would you find in 7 baskets? Three eggs break. How many eggs are there now?

There are 8 sweets in a bag. Show an image of 4 bags. Write a multiplication calculation to show how many sweets there are altogether.

Dragon Speed Flying Competition

Toothless and Hiccup have entered a flying competition but Gobber the Belch forgot to record the final scores so no-one knows which place they came in!

This is Toothless' flight path...



Points

- Hoop = 4 points
- Nose Dive = 8 points
- Target Strike = 50 points
- Loop the Loop = 100 points

Horrorcow scored 100 less than Toothless.
 Fireworm scored 10 more than Seaslug.
 Seaslug scored three hundred and seven.
 Gronckle scored 10 less than Horrorcow.

Use the information to work out the order from first place to last. Write the scores using digits and words.

Topic / Skill: Recognise the value of digits in a 3 digit number.

Conceptual-

Build the numbers using Dienes and show using pictorial representations.

Use Base 10 to represent the following numbers.

- 700
- 120
- 407
- 999

Fluency-

Representing numbers in different ways.

Write down the number represented with Base 10 in each case.

Representation	Number

Sanjay is drawing numbers. Can you complete them for him?

246 390 706

What is the value of the number represented in the place value chart?

Hundreds	Tens	Ones

Write it in numerals and words.

Complete this place value chart so that it shows 354

Hundreds	Tens	Ones

What number would this make?

Reasoning-

Use children's understanding of the value of numbers to allow them to compare numbers by size. Can they explain why numbers are larger/smaller than each other.

What number is shown in the place value chart?

Hundreds	Tens	Ones

If one more is added. What number would be shown?

How do you know?

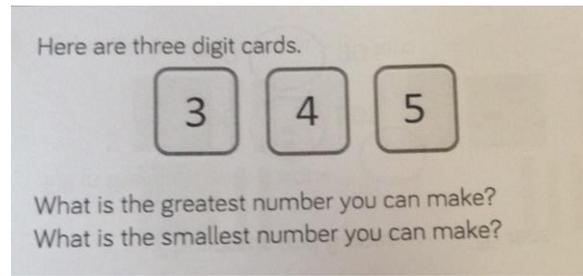
True or false?
The place value grid shows 615

Hundreds	Tens	Ones

Put < > or = in the circles to make the statement correct.

Problem Solving:

Open ended problem around the size of numbers.



Topic / Skill: Find 10 or 100 more or less than a given number.

Conceptual-

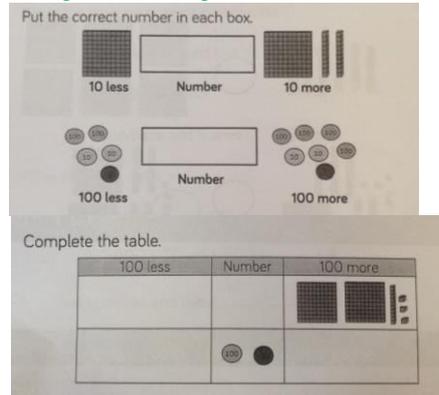
Using the flip over place value cards, teach children that when adding ten or 100, we usually only focus on adding a number to one column,

Show this using Base 10 counters. Make the number on the card. Add the ten or 100 to the number by adding the counter. Show this by flipping the card at the same time.

Repeat this process for taking 10 and 100 away – finding 10 /100 less.

Fluency-

Adding and subtracting 10 and 100 to/from different numbers.



Reasoning-

Children to reason around the answers they get when adding 10 or 100.

Always, sometimes, never...

When I add 10, 100, the ones _____ change.
Explain your answer.

Give me a silly answer to $145 + 10$
Why is it a silly answer?

True or False?

I can't take away 10 from 209.

Problem Solving-

Children to use this skill to solve number problems where adding/subtracting 10 and 100 is required.

Topic / Skill: Comparing and ordering numbers to 1000.

Conceptual – Start by building numbers using Base 10. Physically, which is less, which is more?

Talk about what makes a number larger. Come back to the place value and discuss the value of each column.

Fluency –

Comparing two number using $<$ and $>$ signs.

Completing statements like:

Ordering numbers. Arranging them in order starting with both the smallest and the greatest.

Reasoning –

Articulation of why a number is larger than another.

Reasoning around the size of hundreds compared to tens.

“98 is larger than 102 as it has more tens” Do you agree?

Problem Solving -

Use of skill to order amounts of money and other measures.

I can add and subtract mentally, including:

- 3.8 A 3-digit number and ones
- 3.9 A 3-digit number and tens
- 3.10 A 3-digit number and hundreds

Pls:

- 3.11 I can add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.
- 3.13 I can solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

addition
add
sum
hundreds
tens
ones
bridging
expanded
addition
expanded
partition
recombine
calculation
more than
pictorial
total
altogether
how many more
is....than....?

Conceptual – Building addition calculations with 2 and 3 digit numbers using Dienes. Ensure that at this stage the numbers do not bridge 10. Can children make jottings/pictorial representations on a H T O grid?

Topic/Skill: Using expanded method to add two numbers (at least one to have 3 digits)

Conceptual:

Children to continue to use the Dienes to support calculations.

1. Why is it important that we add the tens to the tens, and the ones to the ones?
2. How should we lay out our written calculations? Why?

Fluency 1:

Adding 2 numbers where bridging is not required.

$134 + 122 =$

Fluency 2:

Adding 2 numbers where bridging is required.

$135 + 127$

Reasoning:

Can children identify and explain if a calculation has been completed correctly.

Can children articulate around when it would be appropriate to use such a method?

Can children identify when they must bridge the ten?

Problem Solving:

Application of this method to solve multi-step problems.

Money to Spend!

Mrs Graham has won some money to spend on books for the school. She has £150 to spend on lots of different books to help with our learning!



BUT she is very busy teaching Year 6 so hasn't got time to work out which books to buy. Can you help her?

Look at the list below, what different books can she buy to spend as close to £150 as possible. Remember, she can buy more than one of each. Find all the possibilities.

- World Atlas – £22
- Dictionary - £6
- Thesaurus - £7
- Roald Dahl Collection - £39
- How to Train Your Dragon - £4
- Viking History - £10
- All About Space - £12

Challenge Miss Green has won another £173! How much do they have to spend in total? What could they buy?

KPIs:
I can add and subtract mentally, including:

- 3.8 A 3-digit number and ones
- 3.9 A 3-digit number and tens

3.10 A 3-digit number and hundreds

Pls:

- 3.11 I can add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.

3.13 I can solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

subtract less than subtraction expanded exchanging hundreds tens ones difference column how many are left over?
How many are gone?
fewer
one less
two less
one hundred less

Conceptual – Building subtraction calculations with 2 and 3 digit numbers using Dienes. Ensure that at this stage the numbers do not require any exchanging. Can children make jottings/pictorial representations on a H T O grid?

Topic/Skill: Using expanded written method to subtract two numbers.

Conceptual:

Children to continue to use the Dienes to support calculations.

Fluency 1:

Subtracting 2 numbers where exchanging is not required.

156 - 42

Fluency 2:

Subtracting 2 numbers where exchanging is required.

185 - 47

Reasoning:

Can children identify and explain if a calculation has been completed correctly?

Always, Sometimes, Never. If the number on the bottom is larger than the number on top, I must exchange from the column to the left.

Can children articulate around when it would be appropriate to use such a method? Provide children with a list of calculations. Which need written methods? Which need mental?

Problem Solving:

Application of this method to solve multi-step problems.

Remember That Flying Competition?

Gobber the Belch is horrified! He has found out that Fireworm and Gronckle cheated! He is so furious he has demanded the scores be checked by someone who doesn't live on Berk.



At the end of the competition, Fireworm was awarded 317 points and Gronckle had 33 points less than Fireworm.

Fireworm did not do one of the Loop the Loops she was given points for, and pretended she had flown through an extra hoop!

Gronckle's master shot a target with a flaming arrow and said Gronckle did it AND one of his nose dives did not last the required time.

Can you use the points below to work out Fireworm and Gronckle's correct score?

Points

- Hoop = 4 points
- Nose Dive = 8 points
- Target Strike = 50 points
- Loop the Loop = 100 points

KPIS
•3.24 I can compare lengths using m, cm & mm.
•3.27 I can measure lengths using m, cm & mm.
•3.30 I can add and subtract lengths using m, cm & mm.

length
width
centimetre
millimetre
metre
unit
long
short
tall
high
low
wide
narrow
thick
thin
distance
far
further
furthest
ruler
metre stick
tape measure

Conceptual – Provide children with lots of objects and their lengths. Use mm, cm and m as units of measure. Can children order the length of the objects?
What can they find out from this? Allow children to deduce $mm < cm < m$.

Topic/Skill: Ordering lengths and sizes presented using mm, m and cm.

Fluency –
Ordering sizes using the different units e.g. 0.5cm, 10mm, 1m, 110cm etc.

Reasoning -
Always, Sometimes, Never. A cm is always larger than a mm.

True or false. 100 cm is the same length as a metre stick. How do you know?

200 centimetres is longer than 2 metres. Convince me.

Problem Solving –
Link to adding/subtracting lengths (to build on the last unit) and then ordering.

Topic/Skill: Accurately measuring items accurately using a range of rulers and tape measures discussing the suitability of each.

Conceptual –
Match each piece of equipment to its job:

30cm ruler	Longish lengths that are difficult to measure
Metre stick	Very short length
Tape measure	Very long distances
Trundle wheel	Lengths up to a metre

Fluency –
Children to measure suggested objects around the room accurately and using the correct piece of equipment.

Reasoning –
Children to reason around why they chose to use a specific piece of equipment to measure an item.

Problem Solving –
Miss Green wants to know exactly how long the playground is from top to bottom. Make a plan to measure our playground using your knowledge from this lesson.

Hiccup the Designer



Hiccup knows more about dragons than most people. He has found 2 injured dragons and wants to help them by building a new tail for one, and new wings for the other. Can you help him?

Dragon 1

This dragon caught her tail in between 2 rocks and the end came off. She wants it to



be shaped like a heptagon to help her balance. Hiccup has worked out that it must have a perimeter of 42cm and must have parallel and perpendicular lines.

Dragon 2

This dragons wings never grew properly so are very small. Hiccup has worked out that we can tie larger wings to his small ones to help him fly. Each wing must have a least one set of parallel lines and have a perimeter of exactly 35cm.



<p style="text-align: center;">Autumn 1 Shape and Perimeter (1 week)</p>	<p>KPIs:</p> <ul style="list-style-type: none"> • 3.24 I can compare lengths using m, cm & mm. • 3.27 I can measure lengths using m, cm & mm. <p>3.30 I can add and subtract lengths using m, cm & mm.</p> <p>Pls:</p> <ul style="list-style-type: none"> • 3.41 I can measure the perimeter of simple 2D shapes. • 3.43 I can identify horizontal, vertical lines and pairs of perpendicular and parallel lines. • 3.44 I can draw 2D shapes 	<p>2 dimensional perimeter horizontal vertical perpendicular parallel corner side point pointed rectangle rectangular pentagon pentagonal hexagon hexagonal right-angled</p>	<p>Conceptual –</p> <p>Carousel of activities</p> <ol style="list-style-type: none"> 1. Exploring 2D shapes and naming and describing 2. Vocab and definition sorting 3. Measuring lines of shapes with a ruler <p><u>Topic/Skill:</u> Showing understanding of vocabulary by finding horizontal and vertical lines, perpendicular and parallel lines on given shapes.</p> <p>Fluency – Children to identify different lines on a range of 2D shapes.</p> <p>Reasoning – A shape can have 2 sets of parallel lines. Convince me. What might this shape look like?</p> <p>Allow children to make other comparisons between shapes. For example, children to sort shapes on sorting diagrams and explain why they have placed them there.</p> <p>Problem Solving – ???</p> <p><u>Topic/Skill:</u> Finding perimeters of 2D shapes.</p> <p>Conceptual – Perimeter is...</p> <p>How can we work perimeter out?</p> <p>Fluency – Children to find perimeters of shapes with given perimeters by adding all the sides together.</p> <p>Reasoning – Johnny says, "I can find out the perimeter of a square by multiplying the length of one side by 4" Do you agree with Johnny? Explain your reasoning.</p> <p>If a square has a perimeter of 20cm. Each side is 5cm. True or False?</p> <p>Problem Solving – Children to measure the length of shapes' sides in order to calculate perimeters.</p>	<p>Big Problem as above – to be completed at the end of both units.</p>
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Year 3 – Autumn 2

Mental/ Oral focus	Weekly arithmetic focus – Matched to strand where possible						
<ul style="list-style-type: none"> Counting 4s, 8s, 50s and 100 10 more/less, 100 more/less Partitioning 3 digit numbers Mental addition and subtraction 	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12	Week 13
	Autumn Test 4	KPI gaps	Autumn Test 5	KPI gaps.	Autumn Test 6	KPI gaps	

	KPIs and PIs	Key Vocabulary	Learning journey	Big Problem ideas
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Autumn 2 Multiplication (1 week)	<p>KPIs: 3.14 I can recall and use multiplication and division facts for the 3x, 4x and 8x tables. 3.15 I can write and calculate mathematical statements for multiplication and division using the multiplication tables, including for 2-digit numbers, using mental and progressing to formal written methods.</p> <p>PIs: 3.16 I can solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which n objects are connected to m objects.</p>	multiplication multiply multiplied by multiple factor groups of times product repeated addition	<p>Conceptual – Recapping understanding of multiplication using apparatus. What happens when we multiply?</p> <p><u>Topic/Skill: Multiplying using an empty number line.</u> (Focus on 4x, 6x, 7x and 8x to build fluency)</p> <p>Fluency – Children to complete calculations on an empty number line.</p> <p>Reasoning – Can children spot errors in someone's workings? Can they articulate how to correct such errors?</p> <p>Can children reason around when to use such a method? For example, would we need this method to complete 4×2. Why?</p> <p>Provide children with a scenario around multiplication. Can they pull the multiplication calculation from it? Good SATs example around eggs.</p> <p>Problem Solving – Link this method to multi step word problems and problems involving measures.</p> <p><u>Topic/Skill: Missing number problems involving multiplication.</u></p> <p>Fluency – $? \times 5 = 20$</p> <p>Use of the number line method to help establish the missing number – leading into division.</p> <p>Look at extended versions.</p> <p>$6 \times ? = 10 \times ?$</p> <p>Reasoning – I am thinking of a number. I multiply it by 6. I get 24. What number was I thinking of? How do you know? Show me with workings.</p> <p>Problem Solving – Develop from the reasoning stage.</p> <p>I am thinking of a number. I multiply it by 4 and add 20. I get 36. What number did I start with?</p> <p>Can you create a riddle like this?</p>	<p align="center"><u>We're Going on a Dragon Hunt</u></p> <p>The citizens of Berk Island are heading off on their annual dragon hunting expedition! There are 48 members of the Hairy Hooligan tribe going, and they will be using their Viking longboats to travel in.</p>  <p>They have two different types of longboat and more than one of each so can take more than one if needed.</p>  <p>Longboat 1 has 8 rows with 4 seats on each.</p>  <p>Longboat 2 has 3 rows with 8 seats on each at the front and 2 rows with 8 seats on each at the back. Which type of longboat would be best, and how many do they need? Explain your answer.</p>
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KPIs:
3.14 I can recall and use multiplication and division facts for the 3x, 4x and 8x tables.
3.15 I can write and calculate mathematical statements for multiplication and division using the multiplication tables, including for 2-digit numbers, using mental and progressing to formal written methods.

PIs:
3.16 I can solve problems, including missing number problems, involving multiplication and division, including integer scaling problems and correspondence problems in which n objects are connected to m objects.

division
dividing
divide
left over
left
remainder
grouping
sharing
share equally
share
equal groups of
halving
array
row
column
number patterns

Conceptual – Recapping understanding of division using apparatus. What happens when we divide?

Topic/Skill: Division without remainders using an empty number line. (Focus on 4x, 6x, 7x and 8x to build fluency)

Fluency –
Children to complete calculations on an empty number line.

Reasoning –
Can children spot errors in someone's workings? Can they articulate how to correct such errors?

Can children reason around when to use such a method? For example, would we need this method to complete 20 divided by 1. Why?

Problem Solving –
Link this method to multi step word problems and problems involving measures.

Topic/Skill: Division with remainders using an empty number line. (Focus on 4x, 6x, 7x and 8x to build fluency)

Conceptual –
What is a remainder?

Fluency –
Children to identify remainders by dividing on an empty number line.

Reasoning –
Always, Sometimes, Never. When you divide there is a remainder. Explain with examples.

Can children evaluate the workings of somebody else? Have they found the correct remainder?

An odd number divided by 4 will always have a remainder. True or False. Explain your answer.

Problem Solving –
Children to complete problems where they are required to round remainders up or down.

4 children share 30 sweets. Do they all get an equal amount? Show how you know.

Divide and Conquer

Now that they have arrived at their destination for the dragon hunt, Gobber the Belch thinks the 48 Hairy Hooligans should split up into groups to find more dragons, and to help stay safe.



The groups must be of equal size. How many different ways could the tribe split up?

There are not enough shields for everyone so they must share. There are 13 shields, how many Vikings need to share each shield? Can this be shared equally? Explain your answer.



KPIs:
3.42 I can add and subtract amounts of money to give change, using both £ and p in a practical context.
Pls:
N/A

money
coins
penny
pence
pound
price
cost
buy
bought
sell
sold
spend
spent
pay
change
dear
costs more
cheap

Conceptual – Allow children to explore the concept with the money and notes. Children to practise exchanging for other coins/notes of the same value.

Topic/ Skill: Finding totals by adding a range of values.

Conceptual –

How many pennies make £1.00?

How many pound coins make a £10 note?

Fluency –

Children to add two or more amounts of money using our written method for addition.

Reasoning –

£1.25 is the same as 125p. True or False.

Explain how you know.

Ms Hipkiss has 24p. I have £12. Together we have £36. True or False. Explain your reasoning.

Problem Solving –

Children to add multiple amounts of money within word problems.

Topic/ Skill: Calculating change (Complete part of this lesson as a developed roleplay. Children to purchase items from shop and be provided with change)

Conceptual –

What is change?

Fluency –

Children to calculate change by subtracting the cost from the money given.

Reasoning –

Children to reason around how they might give change. Complete this through role play with the money.

Problem Solving –

Children to complete multi step problems – calculating the cost and then the change from the money paid with.

Miss Day's £20 Note

I went to the shop at the weekend and bought a new copy of How to Train Your Dragon. It was a bargain and cost

£4.25



The lady in the shop asked me how I would like my change but didn't know what she meant until I asked Miss Bowater.

She said I could have asked for:

- Two notes and as few coins as possible.
- Two notes and as many coins as possible.
- Only one note and the rest in coins.
- Three notes and the rest in coins.
- As many coins as possible (no notes).
- As few coins as possible (no notes).
 - Only silver coins (no notes).

I still don't understand, can you show me?
What is the most efficient way to have my change? Explain your answer.

KPIs:
N/A

Pls:
3.35 I can estimate and read time with increasing accuracy to the nearest minute.
3.36 I can record and compare time in terms of seconds, minutes and hours.
3.37 I can use the following vocabulary: o'clock, am, pm, morning, afternoon, noon & midnight.
3.38 I know the number of seconds in a minute.
3.39 I know the number of days in each month, year and leap year.

day
week
fortnight
month
year
morning
afternoon
before
after
earlier
later
next
first
last
am
pm
hours
minutes
half past
quarter past
seconds

Conceptual – What do we need to know if we are going to tell the time correctly?

Children to explore different activities with time that will develop their stickability around time.

Place picture in books of children working on activities. Children to complete their own stickability post it notes of the information they will need to tell the time.

Topic/ Skill: Describing units of time and comparing them.

Fluency –

How many minutes in an hour?
How many hours in a day?
How many days in a month?
How many months in a year?
How many days in a year?
In a leap year?

Present in different ways – matching activities. True or False.

Use < and > signs to compare units.

Seconds _____ Minutes

2 hours _____ 10 minutes

Reasoning –

What do you notice about the number of seconds in a minute and the number of minutes in an hour?

Show a range of times. Which is the odd one out?

Half a minute. 30 seconds. 1 hour.

Half an hour. 30 minutes. 30 seconds.

Problem Solving –

½ hour on the pedalo costs £3. I want to hire one for 3 hours. What would that cost?

It costs £10 to hire a bike for an hour. I need a bike for 30 minutes. What would that cost?

Topic/ Skill: Reading and writing time to the nearest minute on analogue clocks.

Conceptual Understanding-

Children to use geared clocks to show given times.

How do you know a clock is showing quarter past?
How do you know a clock is showing ten to the hour?

Fluency –

Children to write times as displayed on an analogue clock. Start with the nearest 5 minutes and move onto the nearest minute.

Children to draw the hands on blank clock faces to show given times.

Reasoning –

Children to evaluate how other children have shown different times on a clock face.

Identify something they have done correctly.

What mistake have they made?

What misconception might they have?

Problem Solving –

Show children a clock face showing a given time. A bus journey lasts ten minutes. What time will I get off the bus?

Provide similar problems around reading time and adding durations.

Topic/ Skill: Comparing times by matching digital to analogue.

Conceptual Understanding –

Label this time. Which number is the minutes? Which is the hour?

12:30

Fluency –

Matching digital times to analogue clocks. Provide different layouts to expose children to a range of question organisation.

Put these times in order from earliest to latest. Provide children times in analogue and digital.

Reasoning -

What's the same? What's different about these two times?

Show an analogue clock and a digital time.

Show a range of clock times including digital and analogue. Which is the odd one out? Explain why.

Problem Solving –

Link time to other measures:

Show a range of start and finish times. Can children order the durations from shortest to longest?

School trip

Imagine you are planning a school trip to a local medieval castle.

- I know we need to leave school at 9:00 a.m. and be back for 3:30 p.m.
- It takes 30 minutes to travel each way and we must do at least three different things.

Look at the list of things we could do and the time they take. I wonder how many different ways there are to spend the day at the castle?

Your challenge

Plan as many different ways of spending the day at the castle as you can.



Things to think about

- Which things in the day can't you change?
- How long do you have?
- Can you exchange some activities for others?

Coach to the castle	30 minutes
Coach from the castle	30 minutes
Packed lunch (provided by children)	30 minutes
Medieval themed lunch (provided by castle)	50 minutes
Medieval painting activity	50 minutes
Medieval pottery activity	70 minutes
Entry to the special 'Medieval life' exhibition	60 minutes
Exploring the medieval gallery	40 minutes
Medieval dress-up	30 minutes
Handling medieval artefacts	15 minutes
Medieval castle treasure hunt	45 minutes
King Arthur experience	3 hours
Mosaic making	70 minutes
Medieval play area	As long as wanted
Tour of the dungeons	25 minutes
Tour of the towers	35 minutes
Visit to the gift shop	20 minutes

Autumn 2
Inverse of Addition and Subtraction
(1 week)

KPIs:
I can add and subtract mentally, including:
3.8 A 3-digit number and ones
3.9 A 3-digit number and tens
3.10 A 3-digit number and hundreds

PIs:
•3.11 I can add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction.
•3.12 I can estimate the answer to a calculation and use inverse operation to check answers.
3.13 I can solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction.

subtract less than subtraction expanded exchanging hundreds tens ones difference column how many are left over?
How many are gone?
fewer
one less
two less
one hundred less
addition
add
sum
hundreds
tens
ones
bridging
expanded
addition
expanded
partition
recombine
calculation
more than
pictorial
total
altogether
how many more is....than....?
inverse
operation

Topic/ Skill: Recapping expanded written method to solve addition and subtraction calculations.

Fluency –
Provide children with simple word problems and calculations to practise addition and subtractions methods.

Reasoning -
Ask children to reason around their use of the method.

Which of these calculations would you need to use a written method to complete?

- 123 + 87
- 5 + 3
- 20 + 30
- 56 – 12
- 234 – 122

Explain why.

Problem Solving –
2 step problems involving addition and subtraction.

67 children get on the coach at Corngreaves.
34 get on Timbertree.

The coach holds 120 children. How many spare seats are there?

Show both steps clearly.

Topic/ Skill: using the inverse to solve calculations by rearranging a given calculation so that the answer is missing.

Fluency –
Children to identify missing numbers with calculations. Provide within a context of addition and subtraction.

Reasoning –

Why can't I use the inverse to find the answer in this calculation?

$$85 - \underline{\quad\quad} = 25$$

Children to identify and reason around when they can use the inverse and when they must use an alternative strategy.

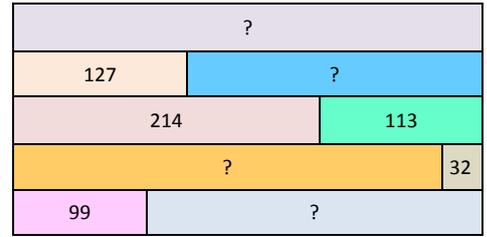
Problem Solving –
I am thinking of a number. I add 45 to the number. I get 127. What number did I start with?

Represent using a bar model.

Ashley has 123 house points. Billy has 37 more house points. How many house points does Billy have?

Represent using a bar model.

Complete the missing boxes in the bar model.



Show the calculations to prove it.