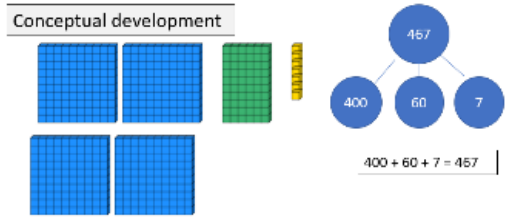
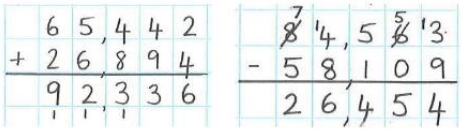
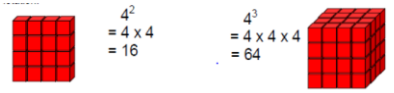
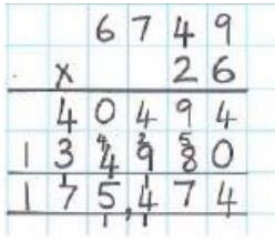
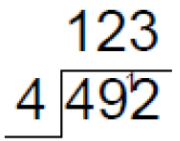
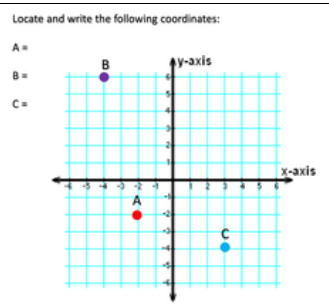
Captain Webb Primary School medium term plan

Year 6

Autumn 1	Strand	Number of weeks	Ready to Progress (Based on National Curriculum objectives)	Key areas of knowledge (small steps in learning)	Resources and methods (Calculation policy)
	Number: Place Value	2	• **Knows how to round any whole number to a required degree of accuracy.** • **Knows how to read, write, order and compare numbers up to 10 000000 and determine the value of each digit** • **Knows the place value of each digit to 10 000 000** • **Knows the value of each digit to three decimal places.**	• I know how to read and write numbers up to 10 million, determining the value of each digit • I know how to compare and order numbers up to 10 million • I know how to round numbers to a degree of accuracy • I know how to count and use negative numbers in context, and calculate intervals across zero	
	Addition & Subtraction	2	• Knows efficient mental methods applying knowledge of properties of number • Knows the compact algorithms for addition and subtraction • Knows how to use mental calculations with increasingly large numbers and more complex calculations	• I know the formal method of addition • I know the formal method of subtraction • I know how to use mental strategies to help me with addition and subtraction calculations • I know how to solve addition and subtraction multi-step problems in context	Disciplinary knowledge must haves (Critical arithmetic): Number bonds to 10 and 20 and rules of inverse 

	Multiplication & Division	2	• Knows efficient mental methods applying knowledge of properties of number • Knows the long algorithms for long multiplication and division • Knows the efficient written algorithms for long/short multiplication and long/short division • Knows the rules of BIDMAS • Knows the compact algorithms for all four operations • Knows how to use mental calculations with increasingly large numbers and more complex calculations	• I know what a common factor is • I know what a common multiple is • I know what a prime and composite number is • I know what square and cubed numbers are • I know the formal method of multiplication • I know the formal method of short division • I know how to interpret remainders in context (as whole numbers, fractions, or by rounding) • I know how to multiply one-digit numbers with up to two decimal places by whole numbers • I know how to solve multistep problems with all 4 operations • I know the correct order of operations (BIDMAS) • I know how to use mental strategies to help me with calculations • I know how to use estimation to check answers to calculations	Disciplinary knowledge must haves(Critical arithmetic): Times table knowledge and divisibility rules See Year 5 (4 x 1, 2 x 2 and 3 x 2)   

	Geometry- Position and direction	1	• Knows how to describe positions on the 4 quadrant grid. • Knows how to draw and translate simple shapes on the co-ordinate plane and reflect in the axes.	• I know how to read coordinates in all 4 quadrants • I know that a shape does not change when it is translated • I know that shapes can be reflected in the x and y axis • I know how to predict missing co-ordinates using the properties of shapes	

Problem solving and Reasoning

Autumn 1	Strand	Number of lessons	Ready to Progress (Based on National Curriculum objectives)	Key areas of knowledge (small steps in learning)	Resources and methods
	Finding all possibilities	3	• I know how to identify are the starting and stopping points. • I know when some solutions are repeated and when it affects the outcome. • I know when the criteria restrict the number of possibilities.	•	

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$a + b = 14$

a and b are whole numbers.

a is a one digit number.

b is a two digit number.

Find four different possibilities for a and b.

a	b

King Arnold

King Arnold sits at a Round Table.

There are 3 empty seats.

In how many different ways can 3 knights sit in them?

What if there are 4 empty seats?

In how many different ways can 4 knights sit in them?

from page 64 of Mathematical challenges for able pupils in Key Stages 1 and 2 (Ref. DfEE 0083/2000; NNS publication)

How old is Oscar and his Dad?

It is less than 50.
It is a 2-digit number.
3 is a factor of this number.
The sum of its digits is one third of the number.
What is Jake's number?

2 Adam chooses the colours for a new team shirt.

The shirt has **two** colours.

There are four colours to choose from: **yellow**, **blue**, **white** and **red**.

Write the **two** missing combinations.

The shirt could be:

- yellow and blue
- yellow and white
- yellow and red
- blue and white.