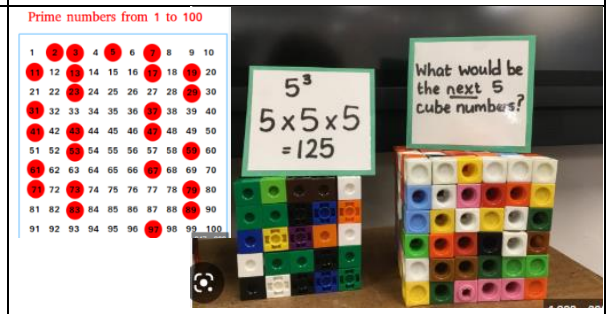
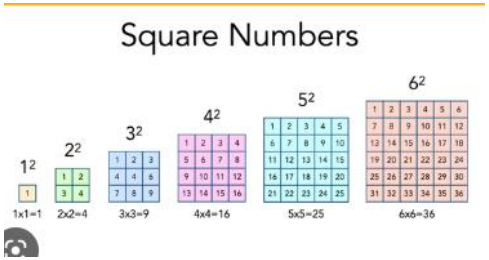
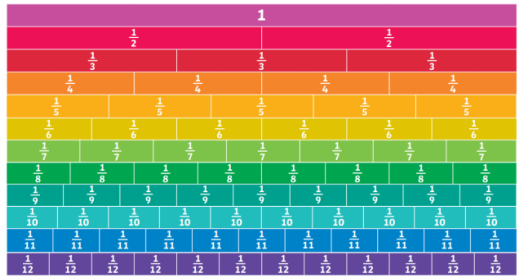
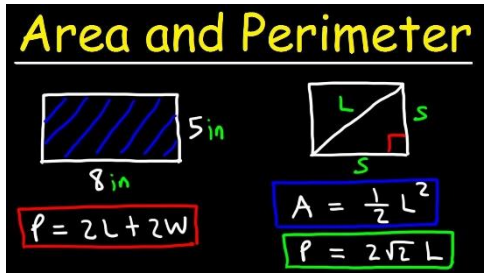
Captain Webb Primary School medium term plan

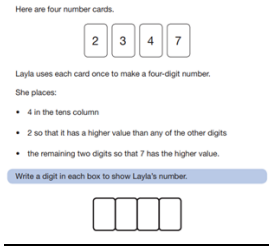
Year 5

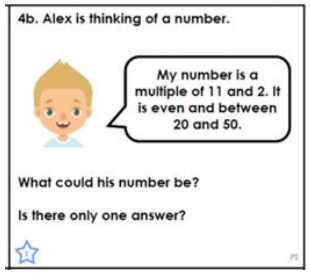
Autumn 2	Strand	Number of weeks	Ready to Progress (Based on National Curriculum objectives)	Key areas of knowledge (small steps in learning)	Resources and methods (Calculation policy)
	Multiplication & Division	2	• **Knows what a common factor and multiple is.** • **Knows how to find multiples and factors including finding all factor pairs of a number and common factors of two numbers.** • **Knows how to recognise and use square numbers and cube numbers and the notation for squared and cubed.** • **Knows the definition of prime and composite numbers.** • **Knows and can use vocabulary of prime numbers, prime factors and composite numbers.** • **Knows prime numbers up to 19.** • **Knows how to establish whether a number up to one hundred is a prime number or composite numbers.** • *Know the test of divisibility for 2, 5 and 10.* *3- digit sum of 3, 6 or 9.* *4 multiple of 4 in tens and ones.* *6 – even and digit sum of 3,6 or 9*	• I know what the term multiple means • I know how to find the highest and lowest common multiple of a number • I know what a square number is • I know what a cube number is • I know what prime and composite numbers are. • I know what factors are • I know how to find the highest and lowest common factors of a number • I know the divisibility rules from 2 to 10. • I know when multiplying by 10,100,1000 the digits move to the left. • I know when dividing by 10, 100 ands 1000 the digits move to the right. • I know how to apply known multiplication facts to more complex sums.	  

			• Knows how to multiply and divide whole and decimal numbers by 10, 100 and 1000 • **Knows efficient mental methods for multiplication and division, drawing on known facts.** • **Knows to multiply and divide numbers by 10,100 and 1000.**		
	Fractions	2	*Count forward and backwards in different fractions.* **Knows how to compare and order fractions whose denominators are all multiples of the same number.** **Knows that when the numerator is larger than the denominator it is an improper fraction.** **Knows that an improper fraction is converted to a mixed number.** **Knows how to recognise mixed number fractions and improper fractions and convert from one to the other.** **Knows how to identify, name and write equivalent fractions of a given fraction, represented visually including tenths and hundredths.**	• I know how to use factors and multiples to recognise equivalent fractions • I know how to find equivalent fractions and simplify them when necessary • I know how to convert an improper fraction into a mixed number • I know how to convert mixed numbers into improper fractions • I know how to compare fractions by making denominators all the same • I know how to order fractions by making the denominators all the same.	

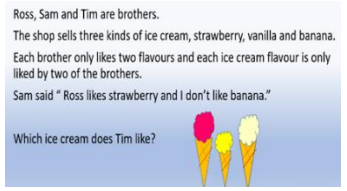
	Measurement- Area and Perimeter	2	• **Knows how to calculate and compare the area of rectangles.** • **Knows how to calculate the perimeter of rectangles and related composite shapes including using the relations of perimeter or area to find unknown lengths.** • *Knows how to solve missing measure questions and express these algebraically.* *Knows how to calculate the area from scale drawings using given measurements*	• I know how to calculate the perimeter of regular shapes • I know how to measure and calculate the perimeter of composite rectilinear shapes • I know how to use a formula to work out unknown lengths of shape • I know how to find the area of rectangles and squares • I know how to find the area of composite shapes • I know how to estimate the area of irregular shapes.	

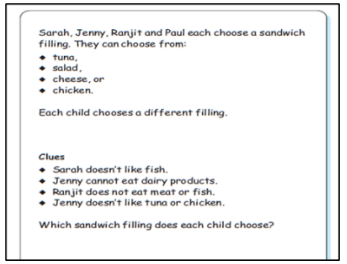
Problem Solving and Reasoning

Autumn 2	Strand	Number of Lessons	Ready to Progress (Based on National Curriculum objectives)	Key areas of knowledge (Small steps in learning)	Resources and methods
	Logic	3	I know where the most useful information is. I know when I have answered the question fully.	• I know how to unpick a problem to retrieve relevant information. • I know how to check my answer against the question.	<u>Lesson 1</u>  <u>Lesson 2</u>


4b. Alex is thinking of a number.
My number is a multiple of 11 and 2. It is even and between 20 and 50.
What could his number be?
Is there only one answer?

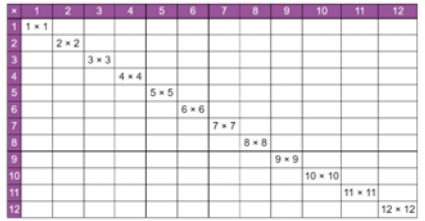
Lesson 3


Ross, Sam and Tim are brothers.
The shop sells three kinds of ice cream, strawberry, vanilla and banana.
Each brother only likes two flavours and each ice cream flavour is only liked by two of the brothers.
Sam said " Ross likes strawberry and I don't like banana."
Which ice cream does Tim like?


Sarah, Jenny, Ranjit and Paul each choose a sandwich filling. They can choose from:
tuna,
salad,
cheese, or
chicken.
Each child chooses a different filling.
Clues
Sarah doesn't like fish.
Jenny cannot eat dairy products.
Ranjit does not eat meat or fish.
Jenny doesn't like tuna or chicken.
Which sandwich filling does each child choose?


Nick-names
Dawn, Mark, Josh and Tina are friends.
They each have a nick-name.
Their nick-names are Spider, Curly, Ace and Fudgy, but not in that order.
What is the nick-name of each of the friends?
Clues
Josh plays tennis with Curly and goes swimming with Ace.
Tina has been on holiday with Curly but travels to school with Fudgy.
Spider, Curly and Dawn play in the football team.
Spider sometimes goes to tea with Josh.

REASONING

	Models of proof	2	I know how to write a single statement to show when something is sometimes true or never true. I know how to write 3 arithmetic statements to prove a generalisation to be true.	I know how to prove that a statement is true or false. I know how to apply my knowledge of number to prove a statement to be true.	<u>Lesson 1</u> **Always, Sometimes, Never** • An even number has an even amount of factors. • An odd number has an odd amount of factors. Eva's age is a multiple of 7 and is 3 less than a multiple of 8 She is younger than 40 How old is Eva? **Always, Sometimes, Never** • The product of two even numbers is a multiple of an odd number. • The product of two odd numbers is a multiple of an even number. 

×	1	2	3	4	5	6	7	8	9	10	11	12
1	1 × 1											
2		2 × 2										
3			3 × 3									
4				4 × 4								
5					5 × 5							
6						6 × 6						
7							7 × 7					
8								8 × 8				
9									9 × 9			
10										10 × 10		
11											11 × 11	
12												12 × 12