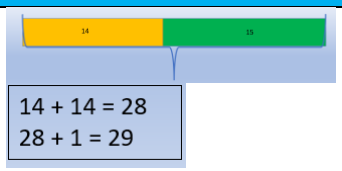
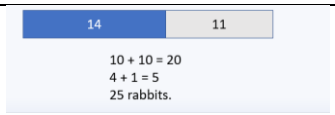
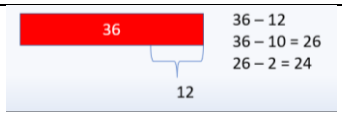
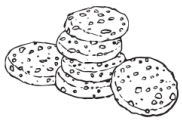
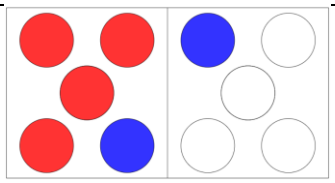
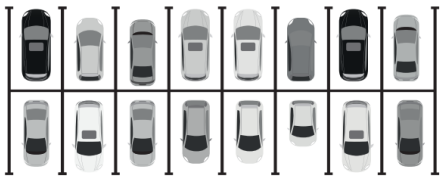
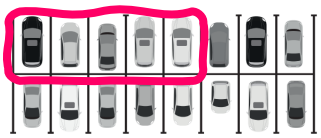
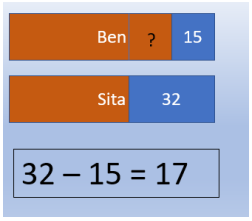
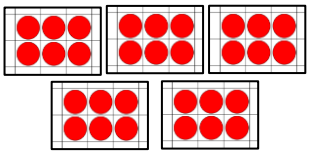
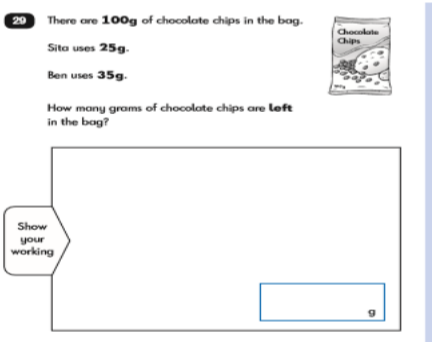
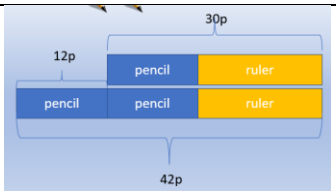
Apley Wood Problem Solving Progression – Word Problems

EYFS

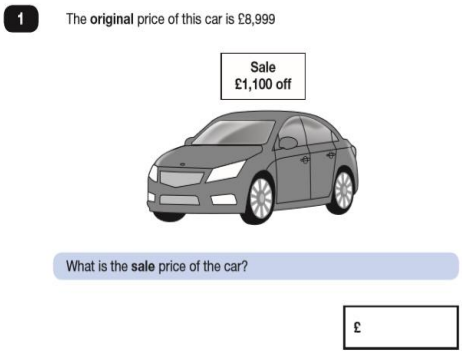
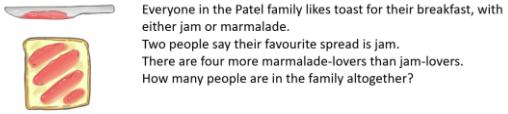
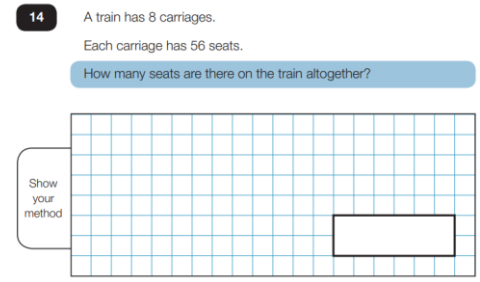
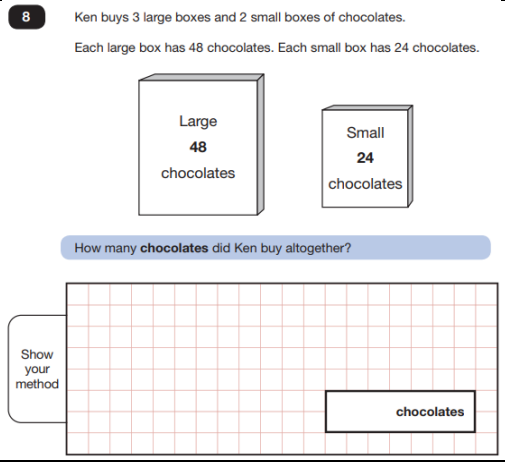
Key Skills and Strategy Development EYFS	Question stems	
Read and analyse the problem.	What is the question about?	
Identify the steps.	What do you need to do?	
Calculate efficiently.	What methods would be best? What resources might you choose?	
Check the solution.	Have you answered the question correctly?	
Example problems	**Model answers**	**Links**
 Early Years Activities - Number Age 3 to 5  Early Years Activities - Measures Age 3 to 5  Early Years Activities - Shape and Space Age 3 to 5  Early Years Activities - Pattern Age 3 to 5		https://nrich.maths.org/13371

KS1

Key Skills and Strategy Development KS1	Question stems	
Read and analyse the problem.	What is the question about?	
Identify the steps.	What do you need to do?	
Calculate efficiently.	What methods would be best? What resources might you choose?	
Check the solution.	Have you answered the question correctly?	
One step example problems	**Model answers**	**Links**
There are 14 girls and 15 boys in Katie's class. How many children are there in the class altogether?		Kate Burton
At the farm, there are 14 white rabbits and 11 grey ones. How many rabbits are there altogether? 		Kate Burton
Tom has 36 toy cars. He gives Simon 12 of them. How many does Tom have left?		Kate Burton
Jenny is reading a book. She reads 9 pages. She has 3 pages left to read. What fraction of the book does she have left to read?	9 + 3 = 12 3/12 = 1/4	Kate Burton
There are 6 cookies in a jar. Tom eats 4 cookies. How many are left?  cookies	 2	Kate Burton

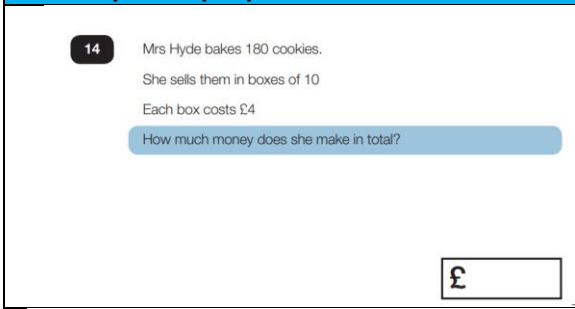
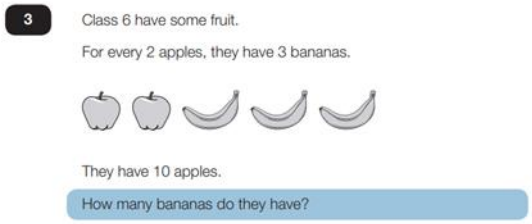
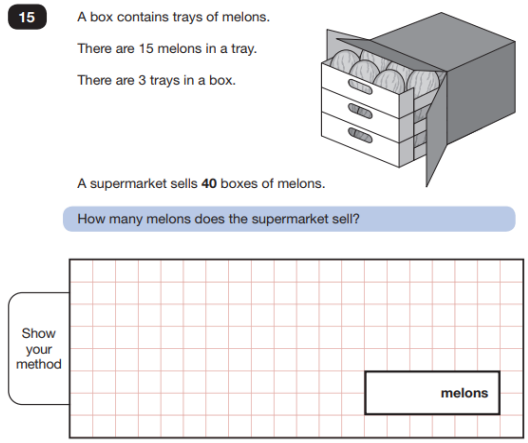
This morning, there were 16 cars in the carpark.  Some cars leave. Now there are 5 cars. How many cars have left the carpark? cars	This morning, there were 16 cars in the carpark.  Some cars leave. Now there are 5 cars. How many cars have left the carpark? cars 16 – 5 = 11	Kate Burton
Two step example problems	**Model answer**	**Links**
Ben and Sita collect animal stickers. They have the same amount. Ben gives away 15 stickers. Sita gives away 32 stickers. How many more stickers does Ben have than Sita now?		Kate Burton
Ben bakes 5 trays of muffins. Each tray holds 6 muffins. Ben sells 16 muffins and eats 5. How many muffins does he have left?	 16 + 5 = 21 30 – 21 = 9	Kate Burton
	35 + 25 = 60 100 – 60 = 40g	KS1 SATS paper
Sita buys these two items for 30p.  Ben buys these three items for 42p.  What is the cost of one ruler?		Kate Burton

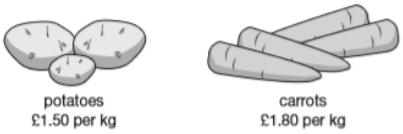
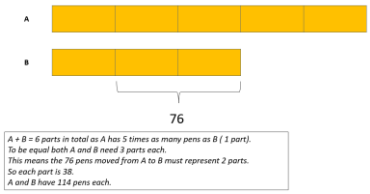
Lower KS2

Key Skills and Strategy Development LKS2	Question stems	
Read and analyse the problem.	What is the question asking you to do?	
Identify the steps.	What arithmetic or calculations do you need?	
Calculate efficiently.	What order do you need to proceed? What methods would be the most efficient?	
Check the solution.	Have you answered the question correctly?	
One step example problems	**Model answers**	**Links**
	8,999 – 1,100 = 7,899	KS2 SATS paper
		Kate Burton
	56 x 8 = 448	KS2 SATS paper
Two step example problems	**Model answers**	**Links**
	48 x 3 = 144 24 x 2 = 48 192	KS2 SATS paper

9 Mr and Mrs Jones are saving for a holiday. Mr Jones has saved £742 Mrs Jones has saved £1359 The holiday costs £3415 How much **more** do they need to save? Show your method £	1,359 + 742 = 2,101 3,415 – 2,101 = 1,314	KS2 SATS paper
6 Aisha cycles 5 laps of a track. The total distance Aisha cycles is 20 km. Ben cycles 7 laps of the same track. How far does Ben cycle in total? Show your method km 2 marks	20 ÷ 5 = 4 7 x 4 = 28 laps	KS2 SATS paper
Multi-step example problems	**Model answers**	**Links**
A bag of 5 lemons costs £1 A bag of 4 oranges costs £1.80  How much **more** does one orange cost than one lemon? Show your method	£1 ÷ 5 = 20p (lemon) £1.80 ÷ 4 = 45p (orange) 45p – 20p = 25p	KS2 SATS paper

Upper KS2

Key Skills and Strategy Development UKS2	Question stems	
Read and analyse the problem.	What is the context of the question?	
Identify the steps.	What arithmetic or calculations do you need?	
Calculate efficiently.	What order do you need to proceed? What methods would be the most efficient?	
Check the solution.	Have you answered the question correctly? Do you need to change the units of measurement in this answer?	
One step example problems	**Model answers**	**Links**
	180 ÷ 10 = 18 18 x 4 = £72	KS2 SATS paper
	2:3 2 x 5 = 10 3 x 5 = 15	KS2 SATS paper
Two step example problems	**Model answers**	**Links**
	15 x 3 = 45 45 x 40 = 1,800	KS2 SATS paper

10 The mass of a box containing 6 tins of beans is 7.5 kg.  When 2 tins of beans are removed, the mass of the box is 5.1 kg. What is the mass of one tin of beans? Show your method kg	7.5 – 5.1 = 2.4 2.4 ÷ 2 = 1.2kg	KS2 SATS paper
Multi-step example problems	**Model answers**	**Links**
16  potatoes £1.50 per kg carrots £1.80 per kg Jack buys $1\frac{1}{2}$ kg of potatoes and $\frac{1}{2}$ kg of carrots. How much **change** does he get from **£5**? Show your method £	£1.50 ÷ 2 = 75p £1.80 ÷ 2 = 90p £1.50 + 75p + 90p = £3.15 £5 - £3.15 = £1.85	KS2 SATS paper
There are 5 times as many pens in box A than box B. Jaz moves 76 pens from box A to box B. Both boxes now have the same amount of pens. How many pens are in box A now?	 *A + B = 6 parts in total as A has 5 times as many pens as B (1 part).* *To be equal both A and B need 3 parts each.* *This means the 76 pens moved from A to B must represent 2 parts.* *So each part is 38.* *A and B have 114 pens each.*	Kate Burton
23 The length of a day on Earth is 24 hours. The length of a day on Mercury is $58\frac{2}{3}$ times the length of a day on Earth. What is the length of a day on Mercury, in **hours**? Show your method hours	58 x 24 = 1,392 24 x 2/3 = 16 1,392 + 16 = 1,408	KS2 SATS paper

10 Adam buys 4 pens and a ruler and pays £4.75 altogether.  Jack buys 2 pens and pays £1.98 altogether.  How much does a **ruler** cost? Show your method 2 marks	Various ways of answering: £1.98 x 2 = £3.96 £4.75 - £3.96 = 79p	KS2 SATS paper