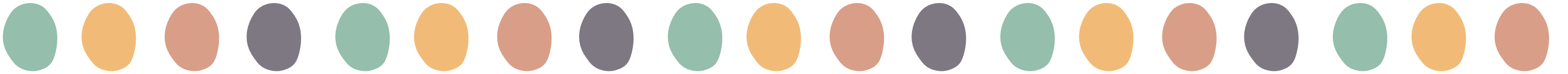


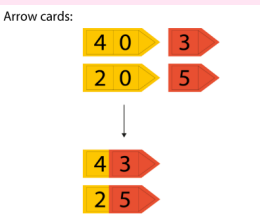
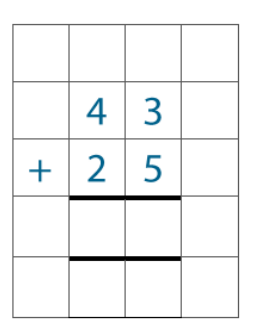
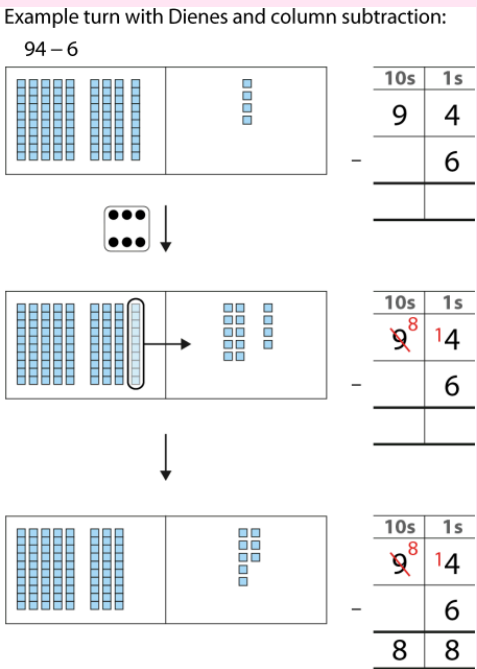
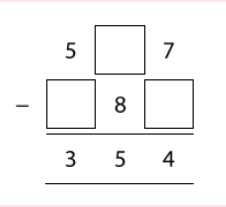
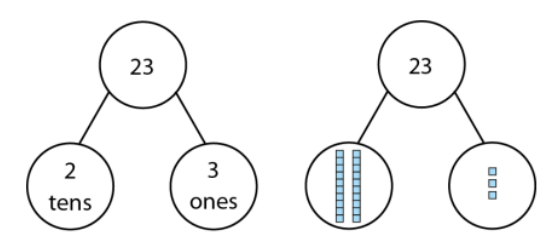
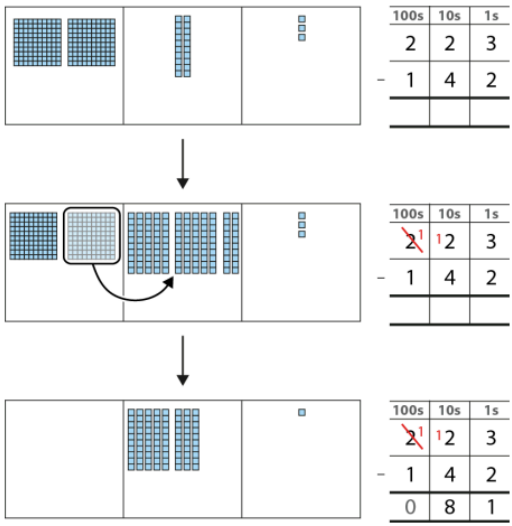
Y4 - Overview

	Autumn 1		Autumn 2		Spring 1		Spring 2		Summer 1		Summer 2		
Unit	1	2	3		4	5	6	7	8	9	10	11	12

	Number and place value
	Number facts
	Addition and subtraction
	Multiplication and division
	Fractions
	Geometry
	Other

Unit 1	Review of addition and subtraction (3 weeks)
Ready to progress	3AS-2 Add and subtract up to three-digit numbers using columnar methods.
NCETM documents	WHOLE DOCUMENT - https://www.ncetm.org.uk/media/a0ohgpkj/ncetm_mm_spl_y3_se20_teach.pdf WHOLE DOCUMENT - https://www.ncetm.org.uk/media/vrgkk1b4w/ncetm_mm_spl_y3_se21_teach.pdf#page=15
Small steps	1.To identify the addends and the sum in column addition. 2.To use knowledge of place value to correctly lay out column addition. 3.To add 2-digit numbers using column addition without regrouping. 4.To add 3-digit numbers using column addition without regrouping. 5.To use column addition to solve problems in different contexts. 6.To use column addition to add 2- and 3-digit numbers by regrouping ones. 7.To use column addition to add numbers by regrouping tens. 8.To use column addition with regrouping in both the ones and tens columns. 9.To use known facts and strategies to efficiently calculate and check column addition. 10.To use column addition with regrouping to solve problems in a range of contexts. 11.To identify the minuend and subtrahend in column subtraction. 12.To use column subtraction to subtract 2- and 3-digit numbers without regrouping. 13.To use column subtraction with regrouping from tens to ones. 14.To use column subtraction with regrouping from hundreds to tens. 15.To decide on and use the most efficient subtraction strategy, including column subtraction.
Links	NCETM SLIDES - https://view.officeapps.live.com/ov/view.aspx?src=https%3A%2F%2Fwww.ncetm.org.uk%2Fmedia%2Fnosnozfc%2Fcp-year-4-unit-1-review-of-column-addition-and-subtraction.pptx&wdOrigin=BROWSELINK Oak academy- https://www.thenationalacademy/teachers/programmes/maths-primary-ks2/units/review-of-column-addition-and-subtraction-roman-numerals/lessons WhiteRose- https://assets.whiteroseeducation.com/new-schemes/Y4%20Autumn%20Block%202%20SOL%20Addition%20and%20subtraction.pdf Greater Depth- https://www.ncetm.org.uk/media/x45na0cs/mastery_assessment_y4.pdf
Reasoning	True or false? Are these number sentences true or false? $427 + 368 = 785$ $902 - 478 = 434$ Give your reasons using what you know about column methods. Hard and easy questions Which of these questions do you think are easy or hard? $435 + 124 =$ $628 - 213 =$ $809 + 395 =$ $734 - 298 =$ Explain why some might be harder. Is it because of regrouping? Convince me $666 = 85$ What is the largest possible number that can go in the box? What is the smallest? Convince me by using subtraction. Making an estimate Which of these number sentences have an answer between 550 and 600? $872 - 284$ $342 + 229$ $1200 - 645$ Estimate first, then check using column methods. Always, sometimes, never Is it always, sometimes, or never true that the difference between two even numbers is even? Try it with different numbers. What do you notice?



Unit 1	Review of addition and subtraction
Problem solving	Click on me
Glossary	- Addend - An addend is a number added to another. - Sum - The sum is the the total when numbers are added together. - Equation - An equation shows that one number or calculation is equal to another. - Column addition - Column addition is a way of adding numbers by writing a number below another. - Regroup - The process of unitising and exchanging between place values is known as regrouping. - Efficient - Being efficient means finding a way to solve a problem quickly whilst also maintaining accuracy. - Estimation - Estimation means to find a value that is close enough to the right answer, usually with some thought or calculation involved. - Minuend - The minuend is the number being subtracted from. - Subtrahend - A subtrahend is a number subtracted from another. - Difference - The difference is the result after subtracting one number from another. - Column subtraction - Column subtraction is a way of subtracting numbers by writing a number below another. - Efficient - Being efficient means finding a way to solve a problem quickly whilst also maintaining accuracy. - Mental strategy - A mental strategy is a method chosen to find something out which can be done in your head or with some jottings.
Stem sentences	Addend plus addend is equal to the sum. Addend plus addend plus addend is equal to the sum. We add the ones 'three ones plus five ones.' We add the tens 'four tens plus two tens.' The three is in the ones column- it represents three ones. The five is in the ones column- it represents five ones. For Dines- We line up the ones ____ One(s) plus ____ One(s). We line up ____ Ten(s) plus ____ Ten(s) Column addition- The ____ is in the ones column. It represents ____ one(s). The ____ is in the tens column. It represents ____ ten(s). In column addition, we start at the right hand side. The one(s) column represents ____ one (s) plus ____ one (s) is equal to ____ one (s) The ten(s) column represents ____ ten (s) plus ____ ten (s) is equal to ____ ten (s) Five ones plus seven ones is equal to twelve ones. Twelve ones is equal to five ones plus seven ones. Minuend minus subtrahend is equal to the difference ____ one(s) minus ____ one(s) is equal to ____ one(s) ____ ten(s) minus ____ ten(s) is equal to ____ ten(s)
Representations	Arrow cards:  35 + 12 = 35 + 10 + 2 = 45 + 2 = 47 35 + 12 = 47 Column addition: $\begin{array}{r} 35 \\ + 12 \\ \hline 47 \end{array}$ Horizontal written calculations. Part whole model Bar Model Dienes Column addition Arrow cards Place value headings and charts Example turn with Dienes and column subtraction:  Column subtraction: $\begin{array}{r} 65 \\ - 23 \\ \hline 42 \end{array}$ 23  436 - 204 = 232  436 - 204 = 232 