Resources for Core Curriculum tasks

August 2019

The goal of this document is to help our in-school volunteers who are looking for ideas on how to work with a child on a specific skill.

This document takes the Number Sense Core Curriculum and gives hyperlinks to appropriate resources for the individual skills. Where the resource is a video, we have aimed for a length of no more than 5 minutes. We have restricted ourselves to sites which explicitly provide free information and where there do not seem to be issues with copyright. In some cases the sites ask you to register in order to download the document, but this should not involve any payment. (Many of the sites separately offer items for payment.) The links are a tiny fraction of the resources available.

As we cannot use online resources in our sessions, in some cases we have documented online games in PDF form. In these cases we have credited the source.

As you can see from the gaps, this is a work in progress. We intend to add new links as volunteers, mentors, and others identify them, and to publish new versions periodically. We anticipate giving more than one resource for each skill.

If you identify any item where payment is being requested or where the site seems to limit our right to make the item available to a wide circulation, please let us know so that we can remove the link.

We separately provide support to volunteers from our mentors, who are experienced ormer teachers; if a volunteer is unsure how to access this support, again please ask us.

If a volunteer has developed her or his own resource which they feel would be useful to other volunteers, please send us a description and we will discuss with you adding this to the next iteration of this document. Similarly if you find a link to an existing resource.

Lastly, we would welcome feedback on this document and on the individual links provided.

For any of the purposes above, please contact Number Sense at mail@numbersense.org.uk.

Number Sense
1 2 3 4 5
fun + skills = confidence

Core curriculum Year 1

A glossary of terms is supplied separately

Where a skill means 'do mentally' it says 'mentally' or 'know'

Counting	+	-	x	÷	Measures
Read and write (in digits) numbers to 100.	Add two 1-digit numbers.	Use fingers or scoring out lines to do subtraction.	Use repeated addition for two: 2, 4, 6, 8 , … 20.	Draw half of circle, square, rectangle, or triangle.	Use ruler or tape as a number line.
Count forwards and back on number line.	Add any 2 numbers with total up to 20.	Count backwards or forwards on number line to do subtraction. https://www.youtube.com/watch?v=9_G_TRqBfbM	Count objects or dots in twos.	Find half of 2, 4, 6, 8, 10, or 12 when presented as 2 rows of counters or dots.	Measure small distances with ruler, including length of 1cm on finger to show child estimate.
Count on from any number. Thus, from 5, '6, 7, 8, 9, 10, 11..'	'Count on'. Eg, count 7+4 as '8, 9, 10, 11'.	Subtract 1-digit number from 1-digit number using aids.	Recognise an array as 'two threes' etc. 	Draw quarter of circle, square, or rectangle.	Use more than, less than for distances (also longer, shorter).
Count back from any number, say (9) '8, 7, 6..'	Know number bonds for 10. https://mathgeekmama.com/pyramid-fun-and-easy-math-card-game/	Subtract numbers up to 20 using aids.	Use repeated addition for five: 5, 10, 15,…50.		Recognise different coins
Understand columns labelled T, U are tens and units ('ones').	Know number bonds for 20 in terms of 3 + 7 = 10 so 3 + 17 = 20 etc	Subtract a 1-digit number from a 1-digit number mentally.	Use repeated addition for ten: 10, 20, … 100.	Find quarter of 4, 8, 12, 16, or 20 when presented as four rows of dots or counters.	Equate 10p plus 1p coins to tens and ones as numbers.
Know 45 = 4 tens and 5 ones, etc. Know 16 = '1 ten and 6 ones' etc ('Place Value'). https://sites.google.com	Know 0 + any number = same number.	Know any number - 0 = same number.	https://www.tes.com/teaching-resource/free-multiplication-grid-6331818		Use more than, less than for cash amounts.

/site/primarycpd/latest-news/diyconcretematerialsforplacevalue					
Know < >, more than, less than, and compare numbers to 100. https://nrich.maths.org/5572	Use number sentences with + such as 18 = 3 + 15.	Use number sentences with - such as 18 - 3 = 15.			
Use number sentences such as 12 > 3, 0 < 6	Add 10 to any 2-digit number.	Subtract 10 from any 2-digit number.			
Understand even (two balancing rows) or odd (one object left over). Domino odd and even	Count on 'flipped', eg 4+7 = 7+4 so count '8, 9, 10 ,11'. **7+4 = 4+7 is the "Commutative property"** https://www.youtube.com/watch?v=WYgqRpydBh8				

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Core curriculum Year 2

Needs to follow school teaching plan during year Greyed boxes are if time permits 'Regrouping' is making 10 into ten 1s or ten 1s into a 10

Counting	+	-	X	÷	Measures
Count from 0 in 2s, 3s, and 5s. Use this to count objects or dots in 2s, 3s, and 5s.	Mentally build on known addition facts: eg, 5+5 = 10 so 5+6=11, to help addition.	Understand and use "- version of number bonds to 10". Eg, 6+4=10 so 10-6=4.	Know 3 X 4 = count of 3 rows of 4 etc. https://www.youtube.com/w 	Know 12 ÷ 3 means split 12 equally between 3 people. https://www.tes.com/teaching-resource/free-year-1-fraction-worksheet-12084501	Know 1 metre = 100 centimetres.

			atch?v=bIc idL2Z8N8	https://www.youtube.com/watch?v=fvYgvp2_iMI	
Know even and odd for all numbers to 100. Largest even or odd number	Add two 2-digit numbers without regrouping.	Understand and use '- is inverse of +'. Eg, 7 + 8=15 so 15 - 8=7. **This video also covers a bit about addition, all in 5 minutes** https://www.youtube.com/watch?v=FtjkzSnZ4G4	Know 4 X 3 = 3 X 4 etc. 'Commutative'	Know 12 ÷ 3 is not same as 3 ÷ 12, etc. 'Not commutative'.	Measure 1m on child's height to give them an estimate of 1m.
Solve missing number problems such as. 3 + □ = 10, □ - 12 = 34 Generally use easier underlying sums. https://nrich.maths.org/5652	Add a 1-digit to a 2-digit number with regrouping. https://www.youtube.com/watch?v=pjhlq31kBho https://www.youtube.com/watch?v=8mcTsyV56jI	Subtract one 2-digit number from another with no regrouping. (Use Tens and Units headers if needed.)	Understand and use '÷ is inverse of X'. Eg, as 4 X 5 = 20 , 20 ÷ 5 = 4 etc.	Understand fraction with 1 in top row ('numerator') ½ ⅓ ¼ and draw these on square, rectangle. https://www.youtube.com/watch?v=n0FZhQ_GkKw	Use symbols £ and p Know £1 is 100p. Be able to count amounts with coins.
Estimate numbers to nearest multiple of 10, seeing for example that 26 is closer to 30.	Use partitioning to support addition. Eg, 27 + 7 =27 + 3 + 4 = 34.	Subtract 1-digit from 2-digit number with regrouping (with any aids needed). https://www.youtube.com/watch?v=Buyaqe_L5-Y	Know 2 times table to 2 X 10. Eg, mentally, what is 6 times 2? See all values are even.	Know 2/4 = ¼ + ¼, ¾ = ¼ + ¼ + ¼ etc. See 2/4 = ½ in square.	Know 60 minutes is an hour. Tell time to closest 5 minutes including ¼ past/to and half past.
Count on or back from any number in 10s.	Add two 2-digit numbers with regrouping.	Use partitioning 23 = 20 + 3 = 10 +13 etc to support subtraction.	Know 10 times table to 100. Eg, mentally, what is 10 times 7?	Understand simple fractions of small numbers, eg ⅓ of 6.	See that minutes on clock give 5 times table.

				Relate to ÷.	
Estimate sum of two numbers to nearest multiple of 10.	Mentally add all pairs of 1 digit numbers including sums over 10.	https://www.themeasuredmom.com/40-free-printable-math-games-for-math-fact-fluency/ **Free to get printable "Subtraction bingo" but you need to register on this site**	Know 5 times table to 10 X 5 and recognise pattern. https://nrich.maths.org/6962	Understand ½+½ = 1 ¼ + ¼ + ¼ + ¼ = 1 ⅓+ ⅓ + ⅓=1	Calculate change with simple examples.
Solve simple word problems in +, -, X or ÷. Eg, 4 children each have 5 pencils – how many pencils in total? https://nrich.maths.org/7819	Use 9+1 = 10 to add and subtract 9 mentally. Similarly, use 11 = 10+1 to add and subtract 11 mentally.	Use 'bar modelling' (see glossary) to solve word problems requiring subtraction	Reason that a number not ending in 0 or 5 does not divide by 5.	Understand remainder for small division sums: 7 ÷ 3 is 2 remainder 1. https://www.youtube.com/watch?v=2yS87clNC-s	
	A puzzle using addition https://nrich.maths.org/179				