Hyperlinked Core Curriculum

July 2020

The goal of this document is to provide our In-school Volunteers with ideas on how to work with a child on a specific skill. We hope it will also be of use to teachers and parents, and we are therefore making it publicly available on our website.

This document takes the Number Champions Core Curriculum and gives hyperlinks to appropriate resources for the individual skills. Many of these resources are written specifically for Number Champions by our Mentors, all of whom are experienced teachers. These resources are presented as 'PDF'.

There are also links to some third-party websites. 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 fee. (Many of the sites separately offer items for payment.) Where the resource is a video, we have aimed for a length of no more than 5 minutes. The links are a tiny fraction of the resources available.

As we cannot use online resources in our sessions, in some cases we have translated online games into written 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 a 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.

Our Mentors separately provide support to In-school Volunteers; if a volunteer is unsure how to access this support, please ask us.

If a volunteer has developed her or his own resource which they feel would be useful to others, 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 Champions at mail@numberchampions.org.uk.

Number Champions
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. PDF	Add two 1-digit numbers.	Use fingers or scoring out lines to do subtraction. PDF	Use repeated addition for two: 2, 4, 6, 8, … 20. PDF	Draw half of circle, square, rectangle, or triangle.	Use ruler or tape as a number line.
Count forwards and back on number line. PDF	Add any 2 numbers with total up to 20. PDF	Count backwards or forwards on number line to do subtraction. https://www.youtube.com/watch?v=9_G_TRqBfbM PDF	Count objects or dots in twos. PDF	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..' PDF	'Count on'. Eg, count 7+4 as '8, 9, 10, 11'.	Subtract 1-digit number from 1-digit number using aids. PDF	Recognise an array as 'two threes' etc.  PDF	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..' PDF (same as count on number line)	Know number bonds for 10. https://mathgeekmama.com/pyramid-fun-and-easy-math-card-game/ https://youtu.be/D1hwopQLeCU	Subtract numbers up to 20 using aids. https://www.youtube.com/watch?v=zccK5fxu8oc	Use repeated addition for five: 5, 10, 15,…50. PDF		Recognise different coins

	PDF	https://www.youtube.com/watch?v=BIygi-IR6To PDF (same as above 1-digit subtraction)			
Understand columns labelled T, U are tens and units ('ones'). PDF	Know number bonds for 20 in terms of 3 + 7 = 10 so 3 + 17 = 20 etc PDF	Subtract a 1-digit number from a 1-digit number mentally. PDF	Use repeated addition for ten: 10, 20, … 100. PDF	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/site/primarycpd/latest-news/diyconcretematerialsforplacevalue	Know 0 + any number = same number. PDF	Know any number - 0 = same number. PDF	https://www.tes.com/teaching-resource/free-multiplication-grid-6331818	Recognise equal groups as step to understanding division. https://free-secret-resources.s3-eu-west-1.amazonaws.com/Year-2-Autumn-Block-4-Step-1-HW-EXT-Recognise-Equal-Groups.pdf	Use more than, less than for cash amounts.
Know < >, more than, less than, and compare numbers to 100. PDF https://www.youtube.com/watch?list=RDCMUCW5diHfMyIPW3XNFzh4-1SA&v=tFNoEHnxPvM&feature=emb_rel_end https://nrich.maths.org/5572	Use number sentences with + such as 18 = 3 + 15. PDF	Use number sentences with - such as 18 - 3 = 15. PDF			

Use number sentences such as 12 > 3, 0 < 6	Add 10 to any 2-digit number. PDF	Subtract 10 from any 2-digit number. PDF			
Understand even (two balancing rows) or odd (one object left over). PDF 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. PDF	Mentally build on known addition facts: eg, 5+5 = 10 so 5+6=11, to help addition. PDF	Understand and use "- version of number bonds to 10". Eg, 6+4=10 so 10-6=4. PDF	Know 3 X 4 = count of 3 rows of 4 etc. https://www.youtube.com/watch?v=bIcidL2Z8N8	Know 12 ÷ 3 means split 12 equally between 3 people. https://www.tes.com/teaching-resource/free-year-1-fraction-worksheet-12084501 https://www.youtube.com/watch?v=fvYgvp2_iMI	Know 1 metre = 100 centimetres. PDF
Know even and odd for all numbers to 100. Largest even or odd number	Add two 2-digit numbers without regrouping. PDF	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' PDF	Know 12 ÷ 3 is not same as 3 ÷ 12, etc. 'Not commutative'. PDF	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	Subtract one 2-digit number from another with no regrouping. (Use Tens and Units headers if needed.) PDF	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.	Use symbols £ and p Know £1 is 100p. Be able to count amounts with coins.

	https://www.youtube.com/watch?v=8mcTsyV56jI			https://www.youtube.com/watch?v=n0FZhQ_GkKw	
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. Challenge	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. Relate to ÷.	See that minutes on clock give 5 times table.
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		Multiplication Games	Division Game	

	https://nrich.maths.org/179				