

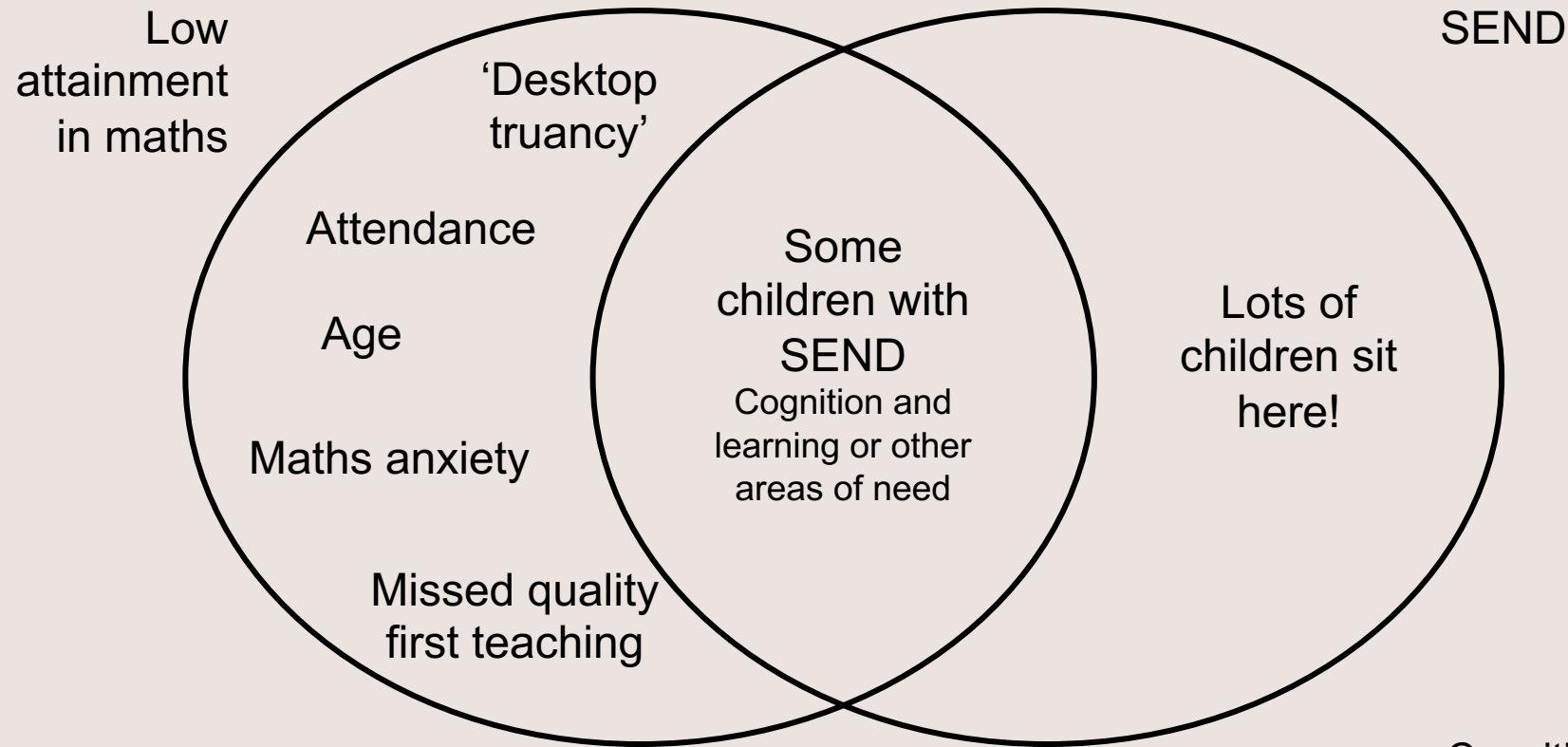
**Planning for SEND provision for a
mainstream Maths Leader**

**Useful things people told me about good
SEND provision**

This session

- Macro: A framework for planning maths provision
- Micro: Pupil stories and observations

This session



- Cognition and Learning
- Communication and Interaction
- SEMH
- Sensory and Physical

Our SEND starting point as a school

- Mismatched targets and provision
- 'Corridor' activity
- Mismatched interventions and main curriculum
- Pick and mix approach to curriculum planning for those with individualised provision
- Inability to separate maths specific SEND from other root causes of low attainment

Useful things people told me

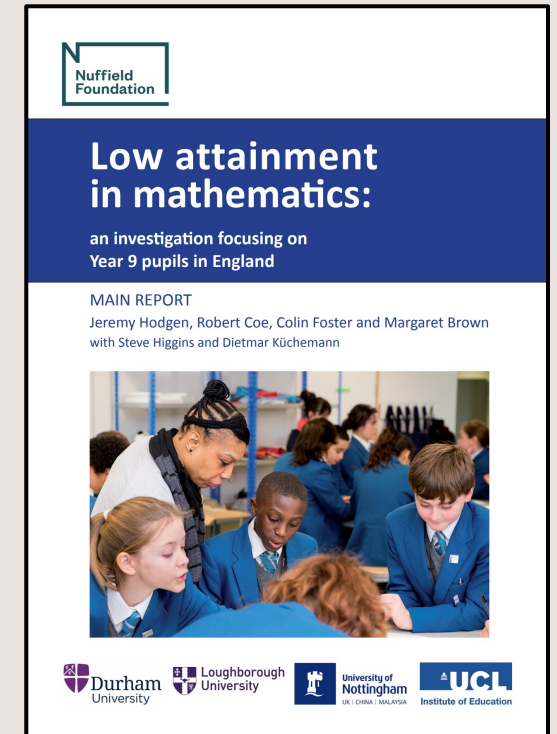
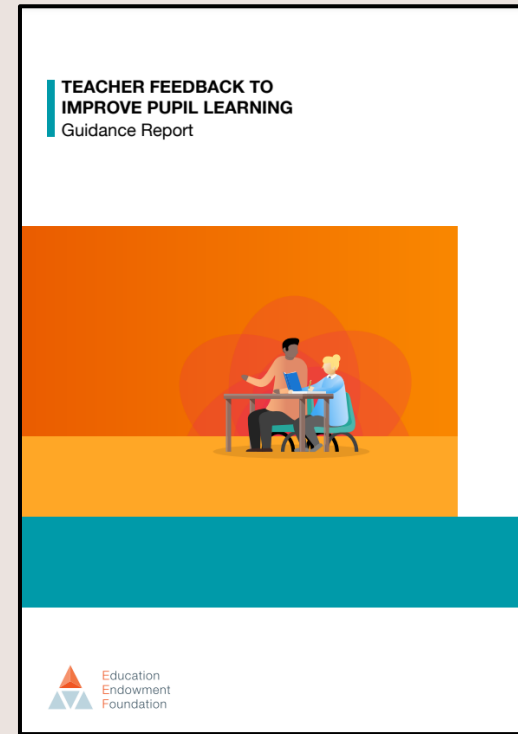
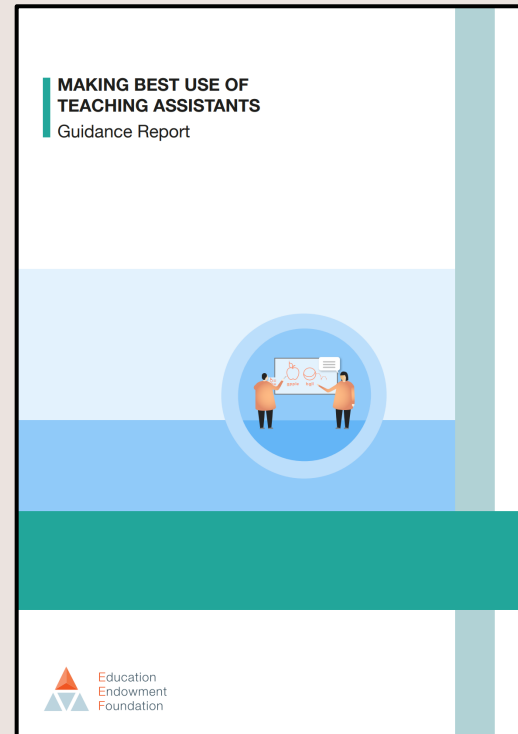
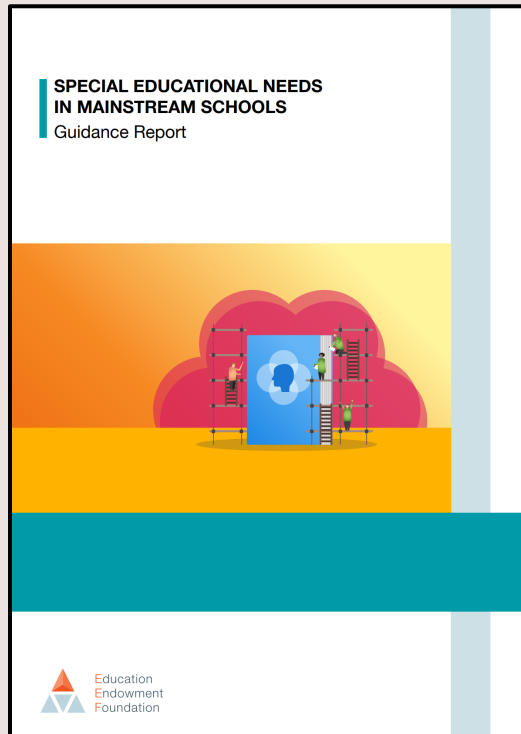
“Find out what they don’t know and teach it to them”

“It’s all about having a good system”

“Without quality first teaching, everything else is a sticking plaster”

“If you get it right for children with SEND you get it right for everyone”

Useful reference materials



Nuffield Report: Findings

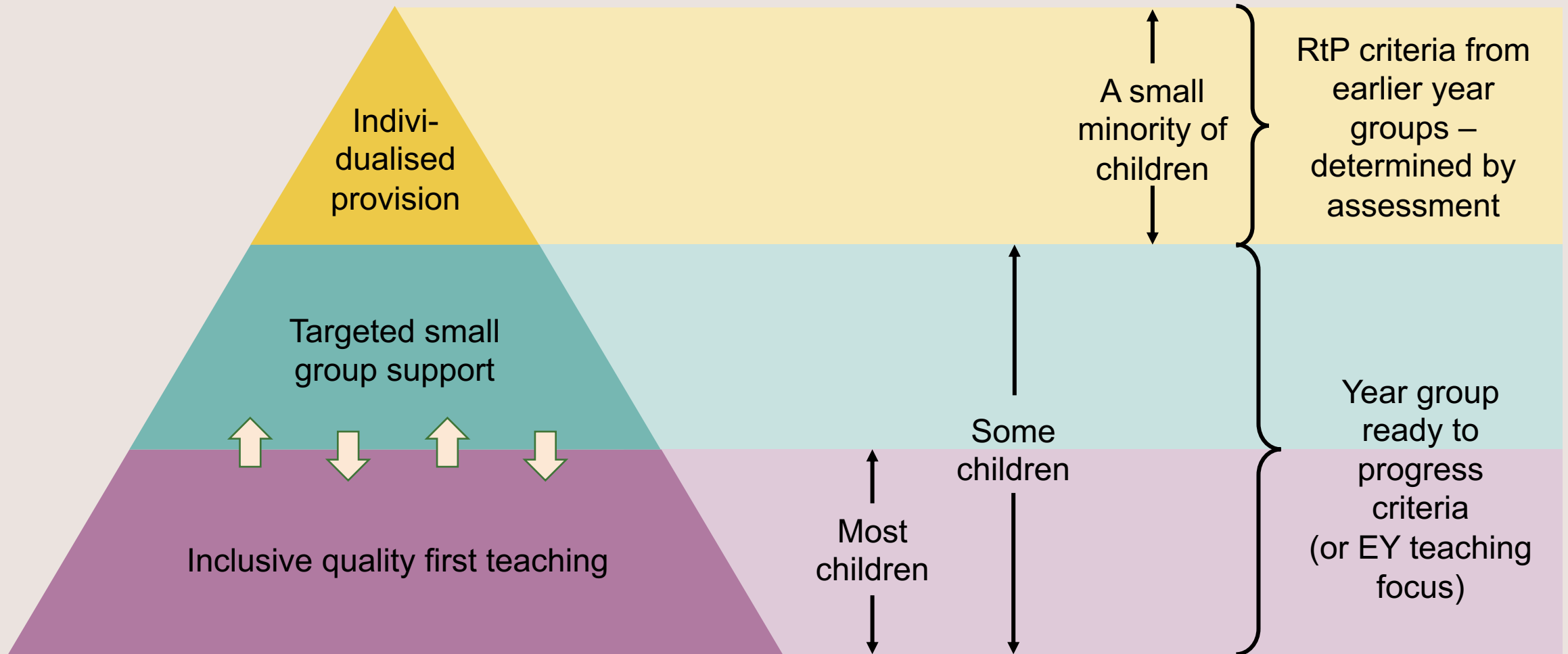
Attainment dominates

- Prior attainment in mathematics is the strongest predictor of future attainment. All other factors (including gender, socioeconomic status, attitudes, etc) are very much second order. What pupils can learn appears to be largely predicted by what pupils already know. Pupils whose attainment profile is mixed (ie low attainers on only one of the measures of prior attainment that we considered) have dramatically improved GCSE prospects over those who are consistently low.

No evidence of threshold concepts

- [Despite these small differences in performance], our analysis is broadly consistent with a view of low attainment as largely characterised by delay rather than qualitatively differential performance. The Y9 low attainers seem to be broadly similar to matched middle and high attaining Y5 group in terms of the broad profile of things they know and can do; however their general mathematical progress is some four years behind.

A tiered approach to maths provision



Quality First Teaching

‘High quality teaching, differentiated for individual pupils, is the starting point in responding to pupils who have or may have SEN.

Additional intervention and SEN support **cannot compensate for a lack of good quality teaching.**’

SEN code of practice

Quality First Teaching

Teacher Standard 5: Adapt teaching to respond to the needs and strengths of all pupils

- know when and how to differentiate appropriately, **using approaches which enable pupils to be taught effectively**
- have a secure understanding of **how a range of factors can inhibit pupils' ability to learn, and how best to overcome these**

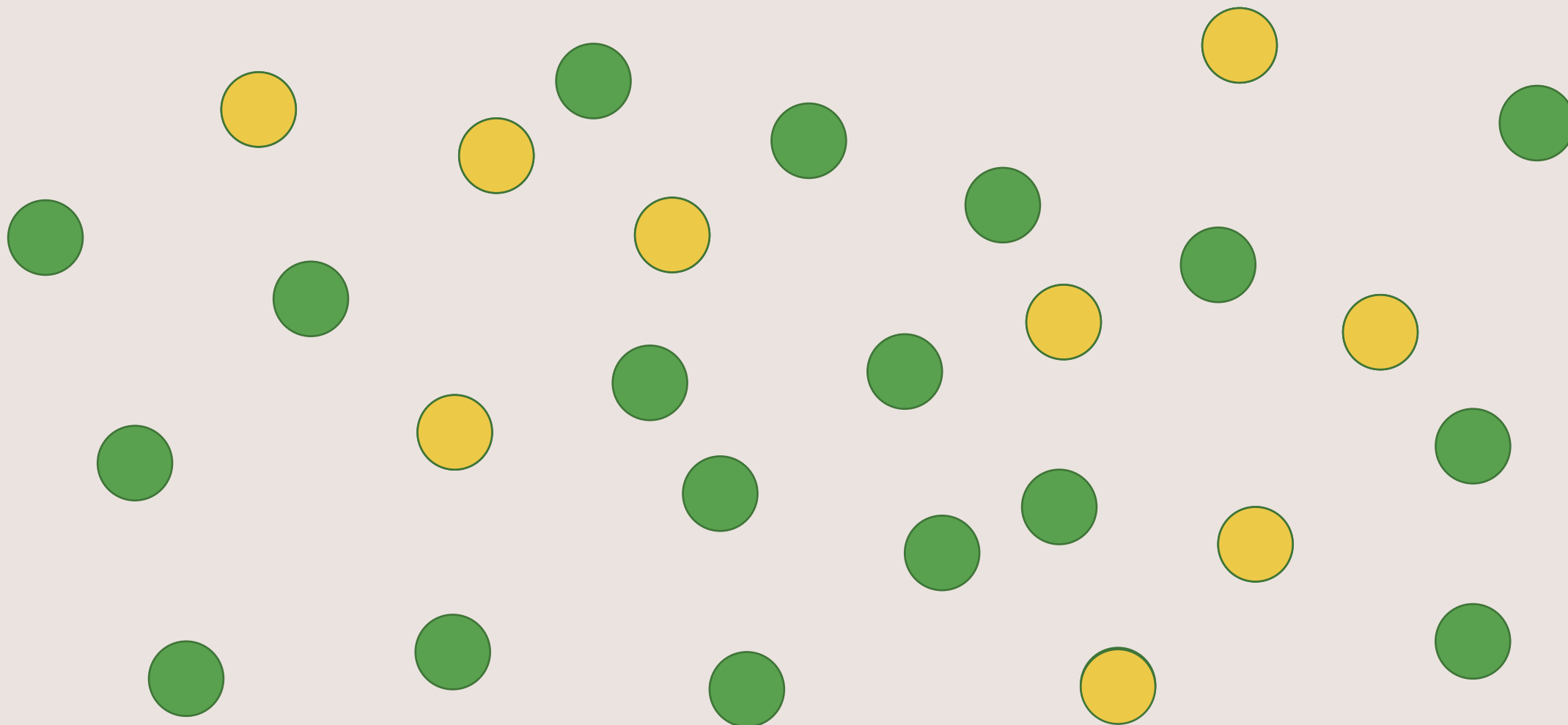
Teachers' Standards

Quality First Teaching

Good teaching is the most important lever schools have to improve outcomes for disadvantaged pupils. Using the Pupil Premium to improve teaching quality benefits all students and has a particularly positive effect on children eligible for the Pupil Premium.

The EEF Guide to Pupil Premium

Identifying underlying SEND



Role of high quality Early Years

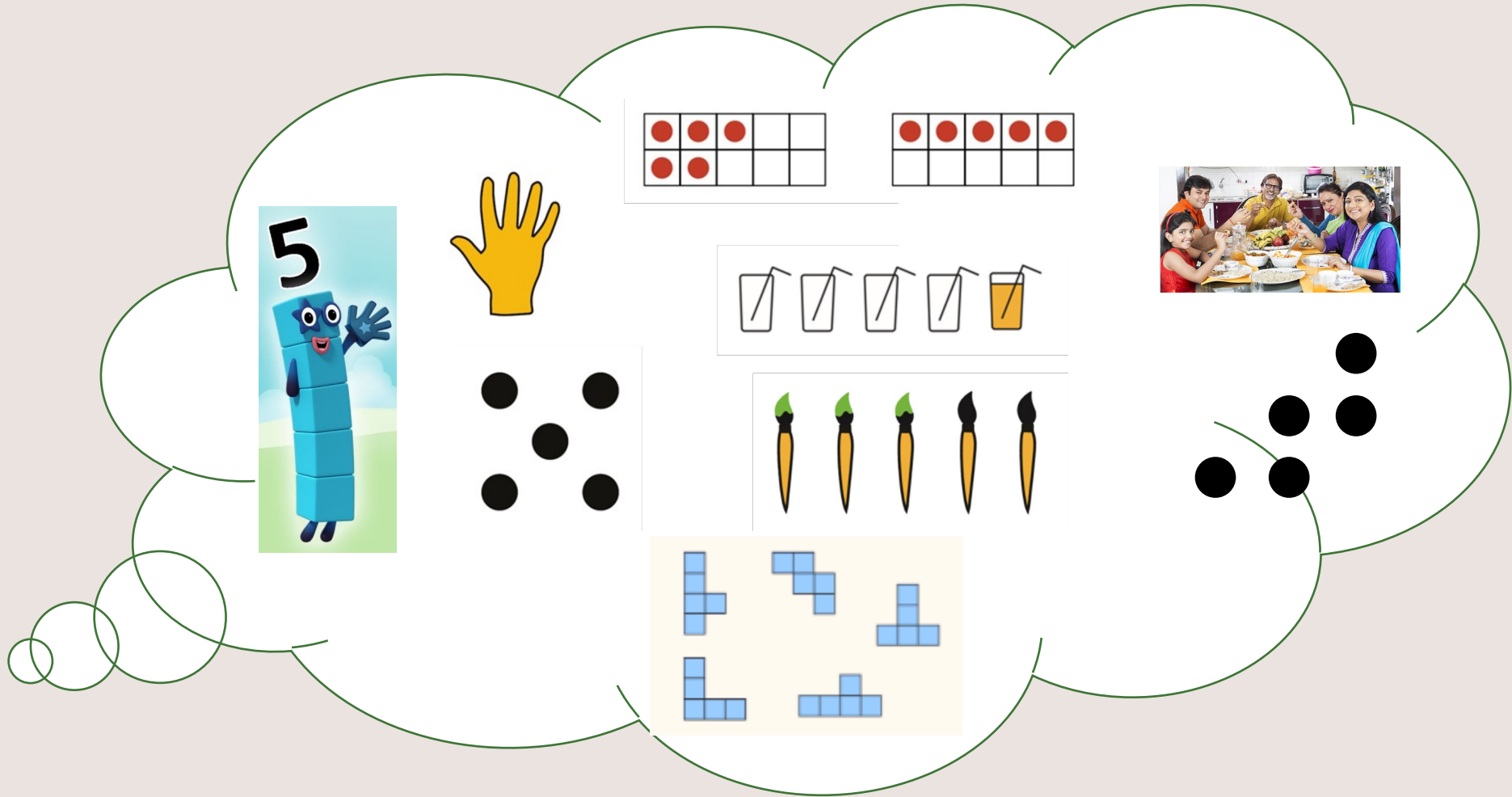
Mathematics

Developing a strong grounding in number is essential so that all children develop the necessary building blocks to excel mathematically. Children should be able to count confidently, develop a deep understanding of the numbers to 10, the relationships between them and the patterns within those numbers. By providing frequent and varied opportunities to build and apply this understanding - such as using manipulatives, including small pebbles and tens frames for organising counting - children will develop a secure base of knowledge and vocabulary from which mastery of mathematics is built. In addition, it is important that the curriculum includes rich opportunities for children to develop their spatial reasoning skills across all areas of mathematics including shape, space and measures. It is important that children develop positive attitudes and interests in mathematics, look for patterns and relationships, spot connections, 'have a go', talk to adults and peers about what they notice and not be afraid to make mistakes.

Role of high quality Early Years

	Communication and Language	Number
Biologically primary knowledge	Speaking	Subitising
Biologically secondary knowledge	Reading	Calculating

Role of high quality Early Years

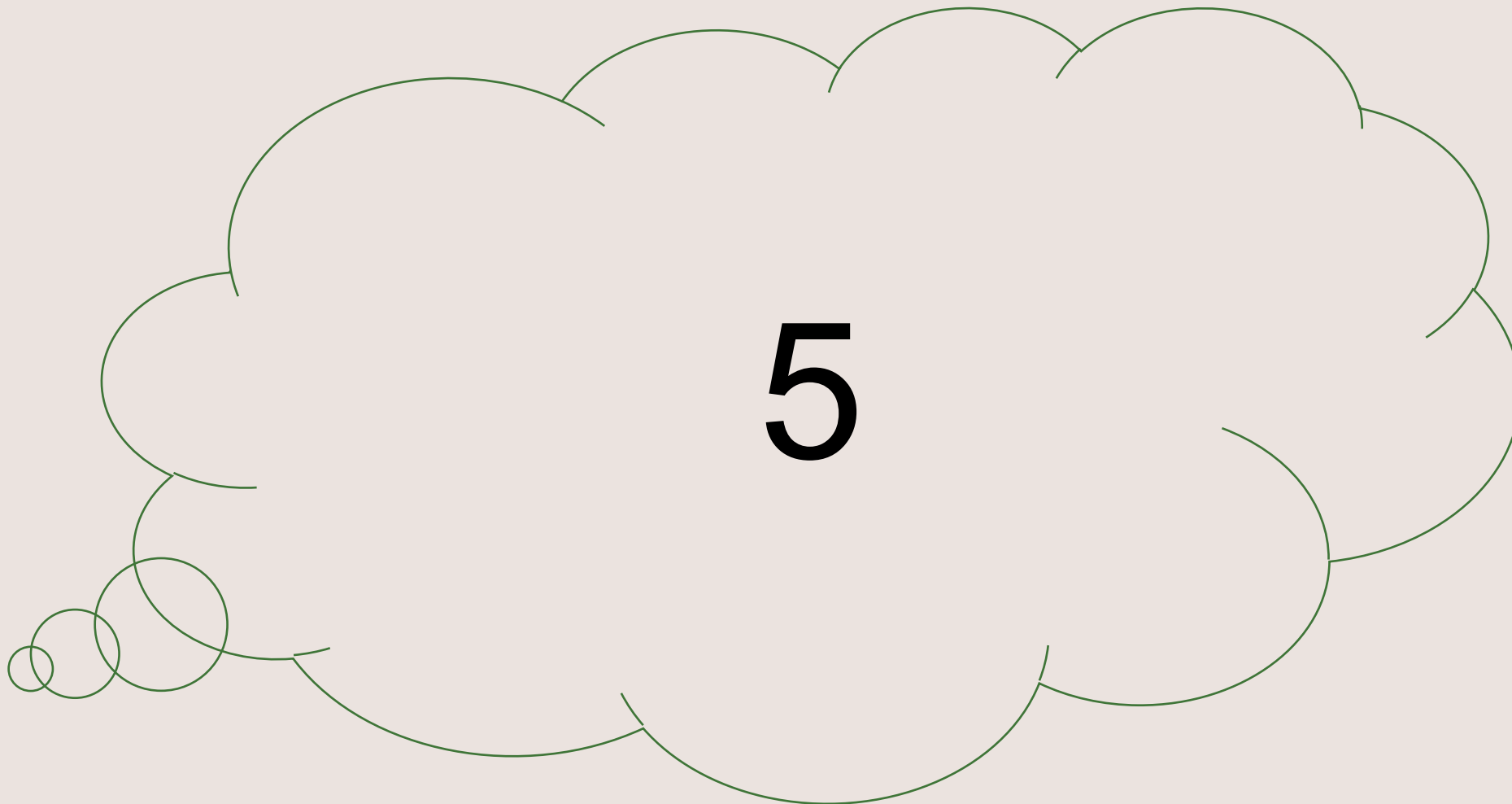


“Five”

Role of high quality Early Years

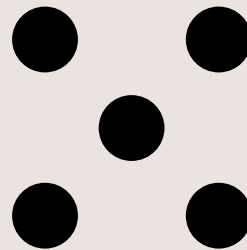
5

“Five”



Role of high quality Early Years

Quantity



Name

“Five”



Spoken label

Numeral

5

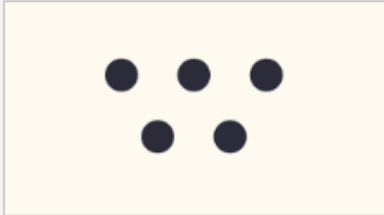


Written label

Role of high quality Early Years

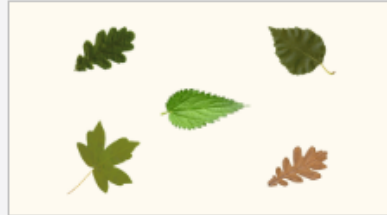
Animations

Please note: the animation playback speed can be changed by clicking on the settings cog when you launch the animation



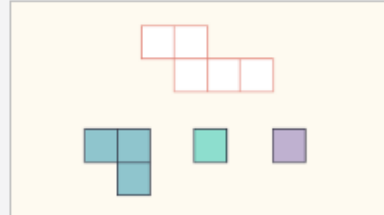
How do you see five?

Different dot arrangements of five. Say what you see – anything goes!



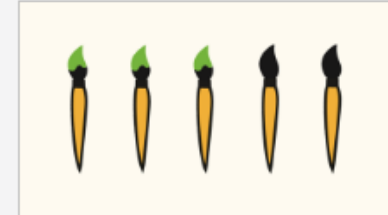
Collections of five

Images of different collections of five. Discuss different ways to sort the objects. Brown vs green leaves? Jagged vs smooth edges? First half has no numerals. Second half repeats animation with numerals.



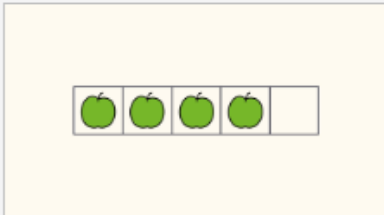
Make a pentomino

What different ways can you see to put the pieces together and match the five spaces in the template? Imagining moving, rotating and positioning the pieces.



Tell a story about five

Everyday contexts involving partitioning five into two parts. Watch the animation and tell the story. First half has no numerals. Second half repeats animation with numerals.



How many more to five?

Use of five frame model to develop knowledge of bonds to five. How many counters? How many more to five? Subitise the apples and the spaces. First half has no numerals. Second half repeats animation with numerals.



What's missing from five?

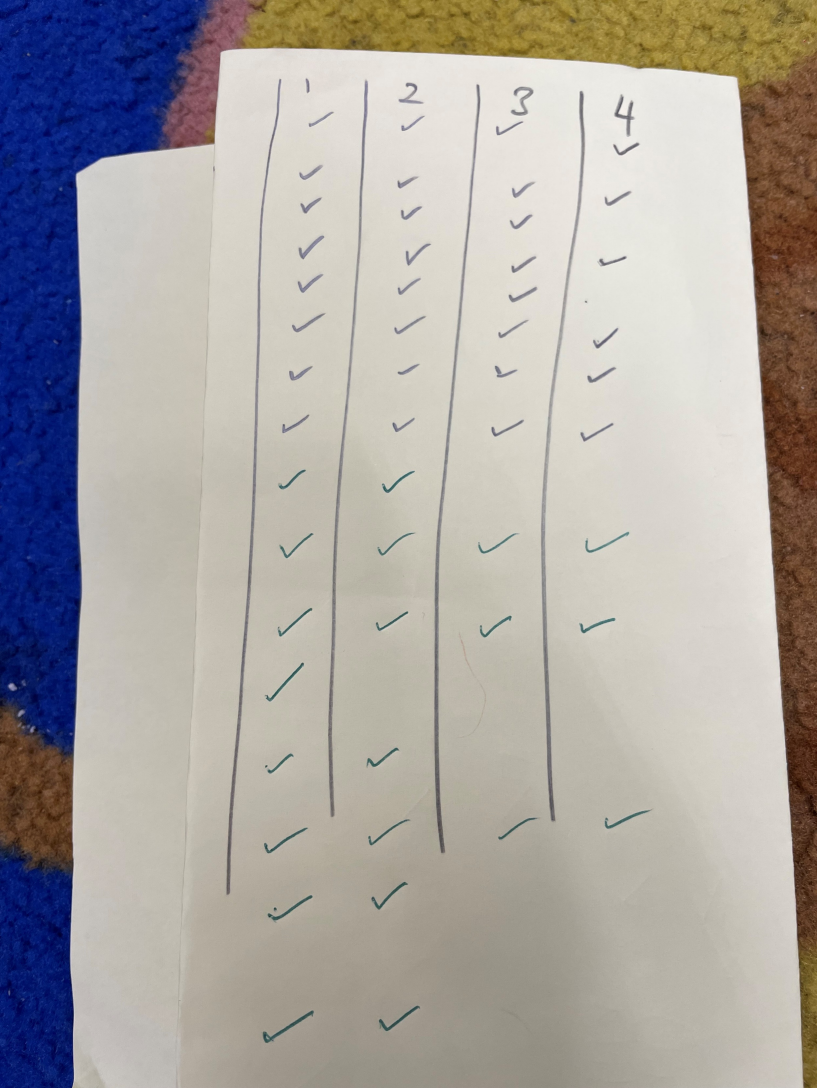
Help children identify bonds to five by encouraging visualisation. There are five cakes in a dice five arrangement. How many have gone missing? When children are confident with these they know their number bonds to five. First half has no numerals. Second half repeats animation with numerals.

Role of high quality Early Years

Teachers' judgements will largely be based on whether children are learning what has been taught and from their observations of development during day-to-day activity in the classroom. Teachers should quickly identify children who need additional learning support, so that the appropriate additional teaching can be put in place.

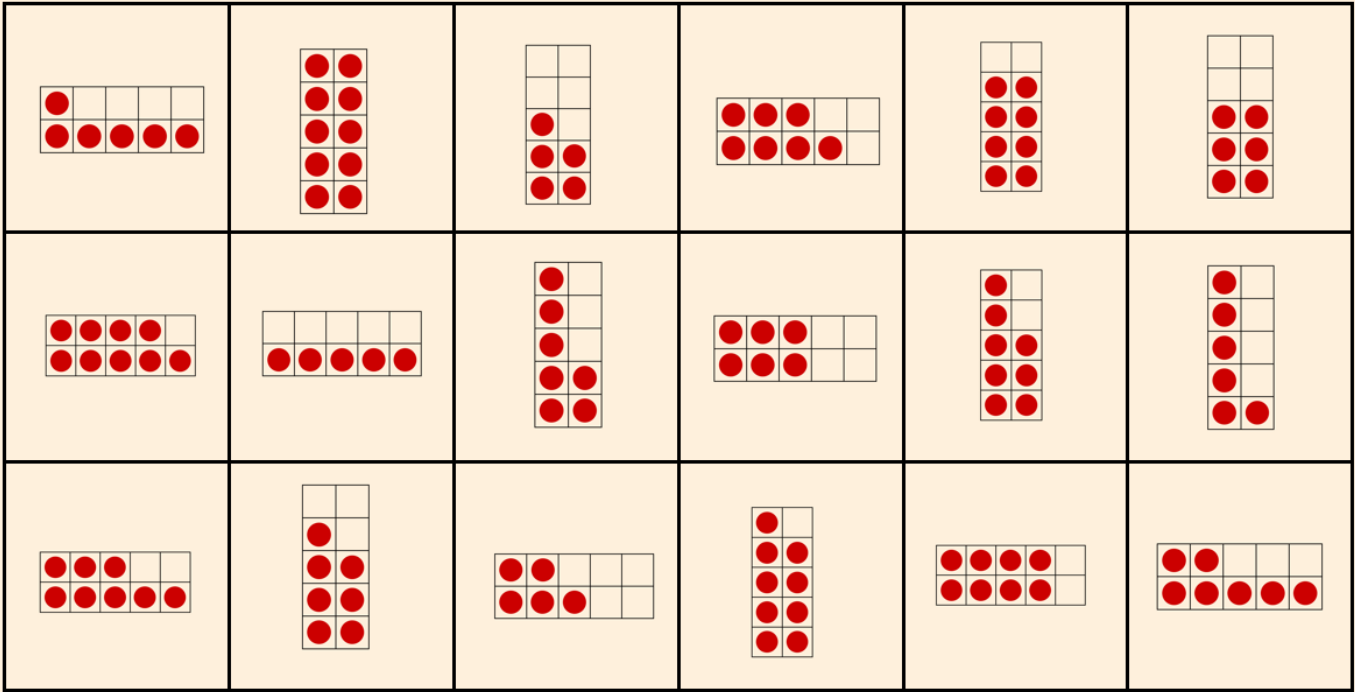
From EYFSP handbook

Targeted (small group) support



“Find out what they don’t know and teach it to them.”

Targeted (small group) support



“Find out what they don’t know and teach it to them.”

Year 1

1NPV-1 Count within 100, forwards and backwards, starting with any number.

1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$

1NF-1 Develop fluency in addition and subtraction facts within 10.

1NF-2 Count forwards and backwards in multiples of 2, 5 and 10, up to 10 multiples, beginning with any multiple, and count forwards and backwards through the odd numbers.

1AS-1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.

1AS-2 Read, write and interpret equations containing addition (+), subtraction (−) and equals (=) symbols, and relate additive expressions and equations to real-life contexts.

1G-1 Recognise common 2D and 3D shapes presented in different orientations, and know that rectangles, triangles, cuboids and pyramids are not always similar to one another

1G-2 Compose 2D and 3D shapes from smaller shapes to match an example, including manipulating shapes to place them in particular orientations.

Targeted (small group) support

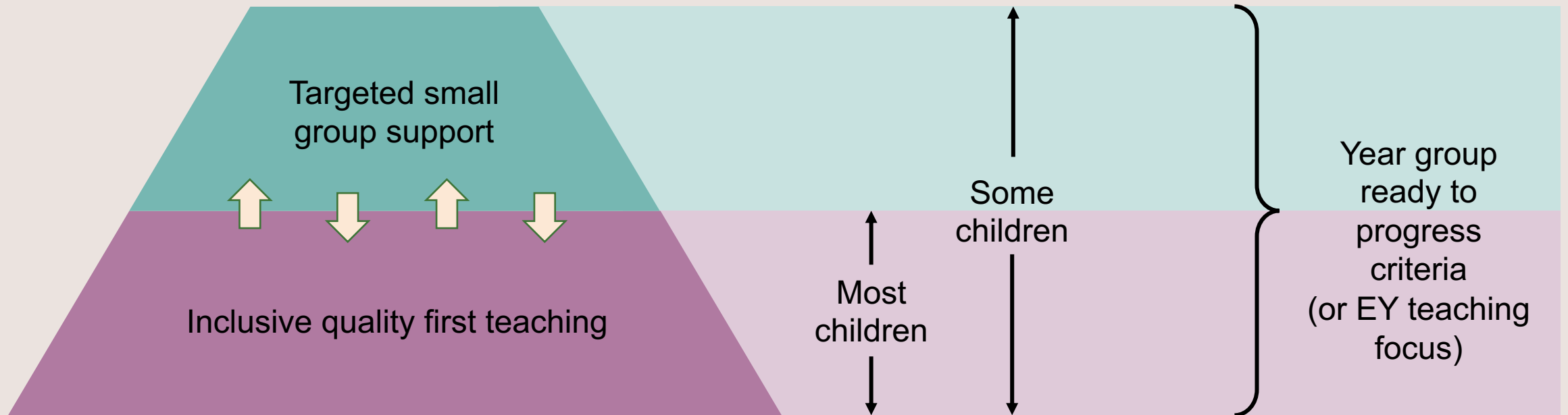
“Find out what they don’t know
and teach it to them.”

100	50
99	49
98	48
97	47
96	46 Prompt
95	45
94	44
93	43
92	42
91	41
90	40
89 Prompt	39 2 seconds
88	38
87	37
86	36
85	35
84	34
83	33
82	32
81	31
80	30
79 2 secs	29
78	28
77	27
76	26
75	25
74	24
73	23
72 Prompt	22
71	21
70	20
69	19 Prompt
68 Prompt	18
67	17
66	16 5 seconds
65	15
64	14
63	13
62	12
61	11
60	10
59	9
58	8
57	7
56	6
55	5
54	4
53	3
52	2
51	1
	0

Role of high quality Early Years (and Year 1)

- Know the big picture: deep understanding of numbers to 10, spatial reasoning, positive attitudes in YR, Y1 RtP in Y1
- Identify some markers and waypoints.
- Little and often targeted support against these – addressing the particular challenge. “Find out what they don’t know and teach it to them.”
- Be aware of complexity of associating both names and numerals with quantities.
- Very careful about implications of ‘book looks’ and request for written recording in Early Years

A tiered approach to maths provision



Useful things people told me

“Find out what they don’t know and teach it to them”

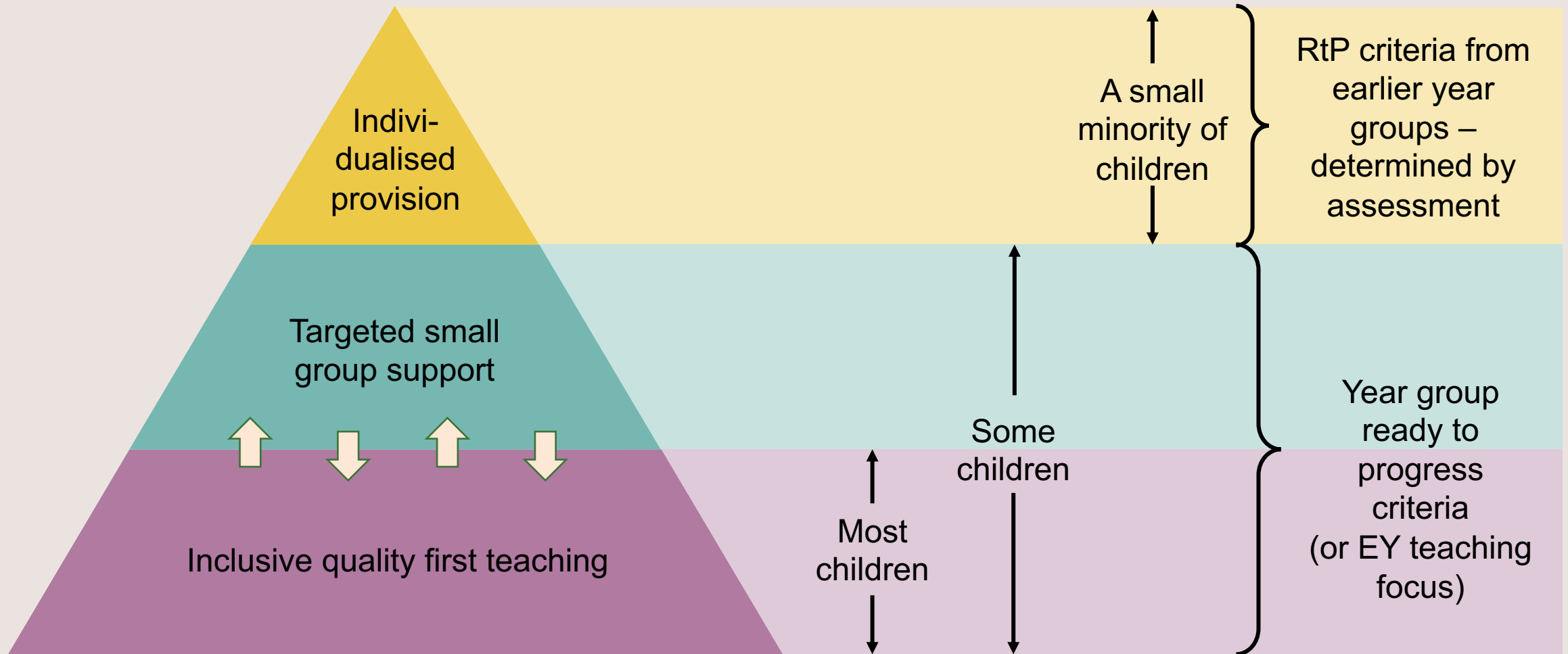
“It’s all about having a good system”

“Without quality first teaching, everything else is a sticking plaster”

“If you get it right for children with SEND you get it right for everyone”

Thoughts so far?

A tiered approach to maths provision



Quality First Teaching: Access Strategies

What access strategies does the non-statutory guidance provide guidance on?

- Coherence
- Manipulatives and representations
- Language structures

The benefits of these are not restricted to children at risk of falling behind peers. They also allow other children to understand the maths more deeply than they may otherwise have done.

Quality First Teaching: Coherence

Making Connections

'Making connections' features discuss important connections between ready-to-progress criteria within a year group. The example below describes how division with remainders is connected to multiplication and fractions criteria.

Making connections

Pupils must have automatic recall of multiplication facts and related division facts, and be able to recognise multiples (**4NF-1**) before they can solve division problems with remainders. For example, to calculate $55 \div 7$, pupils need to be able to identify the largest multiple of 7 that is less than 55 (in this case 49). They must then recall how many sevens there are in 49, and calculate the remainder.

Converting improper fractions to mixed numbers (**4F-2**) relies on solving division problems with remainders. For example, converting $\frac{19}{6}$ to a mixed number depends on the calculation $19 \div 6 = 3 \text{ r } 1$.

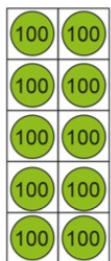
Quality First Teaching: Coherence

Strand	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
NPV	1NPV-1 Count within 100, forwards and backwards, starting with any number.		3NPV-1 Know that 10 tens are equivalent to 1 hundred, and that 100 is 10 times the size of 10; apply this to identify and work out how many 10s there are in other three-digit multiples of 10.	4NPV-1 Know that 10 hundreds are equivalent to 1 thousand, and that 1,000 is 10 times the size of 100; apply this to identify and work out how many 100s there are in other four-digit multiples of 100.	5NPV-1 Know that 10 tenths are equivalent to 1 one, and that 1 is 10 times the size of 0.1. Know that 100 hundredths are equivalent to 1 one, and that 1 is 100 times the size of 0.01. Know that 10 hundredths are equivalent to 1 tenth, and that 0.1 is 10 times the size of 0.01.	6NPV-1 Understand the relationship between powers of 10 from 1 hundredth to 10 million, and use this to make a given number 10, 100, 1,000, 1 tenth, 1 hundredth or 1 thousandth times the size (multiply and divide by 10, 100 and 1,000).
		2NPV-1 Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and non-standard partitioning.	3NPV-2 Recognise the place value of each digit in <i>three</i> -digit numbers, and compose and decompose <i>three</i> -digit numbers using standard and non-standard partitioning.	4NPV-2 Recognise the place value of each digit in <i>four</i> -digit numbers, and compose and decompose <i>four</i> -digit numbers using standard and non-standard partitioning.	5NPV-2 Recognise the place value of each digit in numbers with up to 2 decimal places, and compose and decompose numbers with up to 2 decimal places using standard and non-standard partitioning.	6NPV-2 Recognise the place value of each digit in numbers up to 10 million, including decimal fractions, and compose and decompose numbers up to 10 million using standard and non-standard partitioning.
	1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using < > and =	2NPV-2 Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10.	3NPV-3 Reason about the location of any <i>three</i> -digit number in the linear number system, including identifying the previous and next multiple of 100 and 10.	4NPV-3 Reason about the location of any <i>four</i> -digit number in the linear number system, including identifying the previous and next multiple of 1,000 and 100, and rounding to the nearest of each.	5NPV-3 Reason about the location of any number with up to 2 decimal places in the linear number system, including identifying the previous and next multiple of 1 and 0.1 and rounding to the nearest of each.	6NPV-3 Reason about the location of any number up to 10 million, including decimal fractions, in the linear number system, and round numbers, as appropriate, including in contexts.
NPV			3NPV-4 Divide 100 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 100 with 2, 4, 5 and 10 equal parts.	4NPV-4 Divide 1,000 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in multiples of 1,000 with 2, 4, 5 and 10 equal parts.	5NPV-4 Divide 1 into 2, 4, 5 and 10 equal parts, and read scales/number lines marked in units of 1 with 2, 4, 5 and 10 equal parts.	6NPV-4 Divide powers of 10, from 1 hundredth to 10 million, into 2, 4, 5 and 10 equal parts, and read scales/number lines with labelled intervals divided into 2, 4, 5 and 10 equal parts.
					5NPV-5 Convert between units of measure, including using common decimals and fractions.	

Quality First Teaching: Coherence

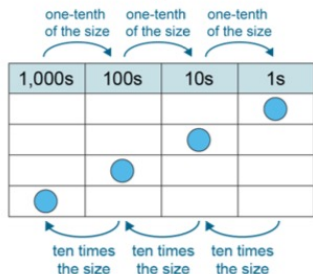
NPV1: Relationship between adjacent place value units

Grouping and exchange model



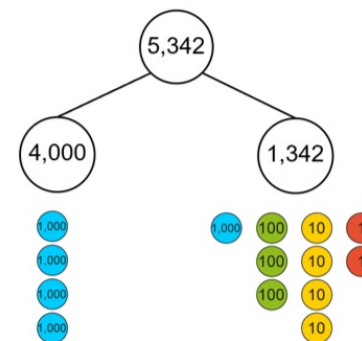
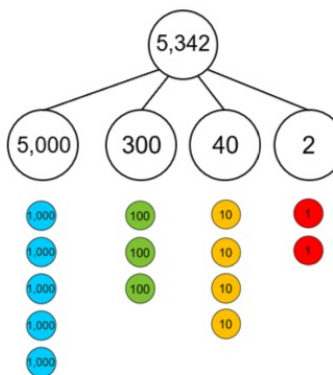
10 hundreds are equivalent to 1 thousand

Scaling model

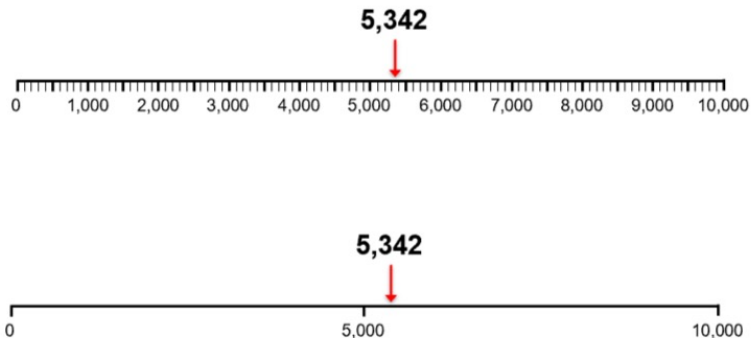


1,000 is ten times the size of 100
100 is one-tenth the size of 1,000

NPV2: Standard and non-standard partitioning

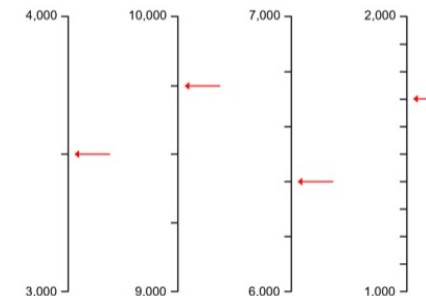
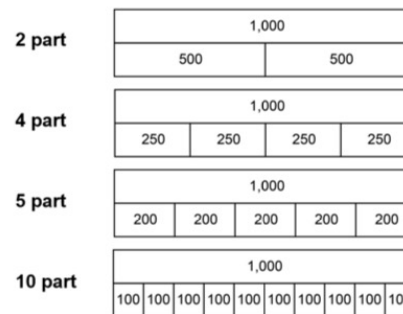


NPV3: Place in linear number system



NPV4: Common partitions of place value units

2, 4, 5 and 10 part composition of 1,000



Quality First Teaching: Manipulatives and representation

Representations of the mathematics

A core set of representations have been selected to expose important mathematical structures and ideas, and make them accessible to pupils. Consistent use of the same representations across year groups help to connect prior learning to new learning. The example below demonstrates the use of tens frames and counters extended from year 1, where each counter represents 1 and a filled frame represents 10, to year 4 where each counter represents 100 a filled frame represents 1,000.

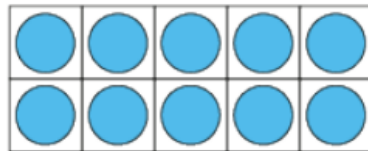


Figure 1: using a tens frame and counters



Figure 2: using a tens frame and counters

Quality First Teaching: Language structures

Language structures

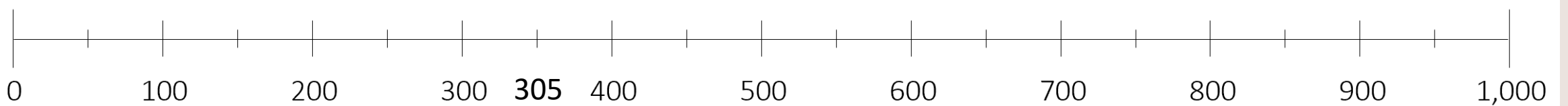
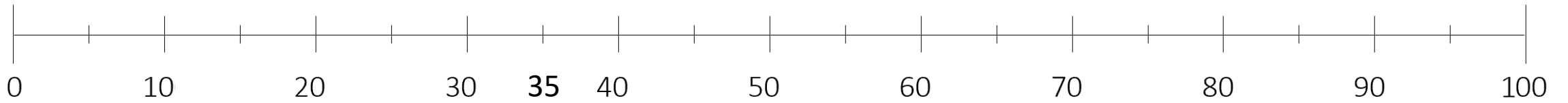
The development and use of precise and accurate language in mathematics is important, so the guidance includes 'Language focus' features. These provide suggested sentence structures for pupils to use to capture, connect and apply important mathematical ideas. Once pupils have learnt to use a core sentence structure, they should be able to adapt and reason with it to apply their understanding in new contexts.

Language focus

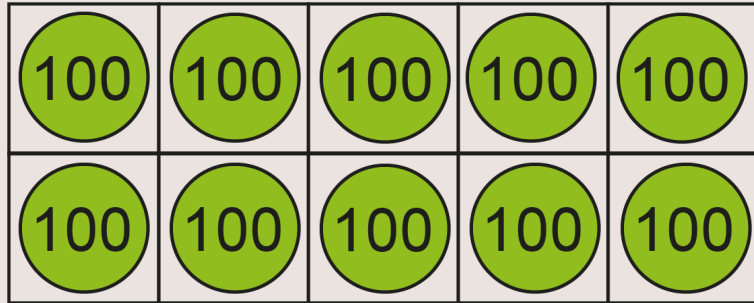
"8 plus 6 is equal to 14, so 8 hundreds plus 6 hundreds is equal to 14 hundreds."

"14 hundreds is equal to 1,400."

Quality First Teaching: An example of access strategies

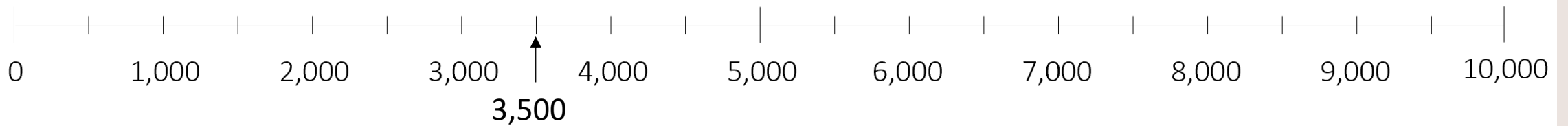


Quality First Teaching: An example of access strategies

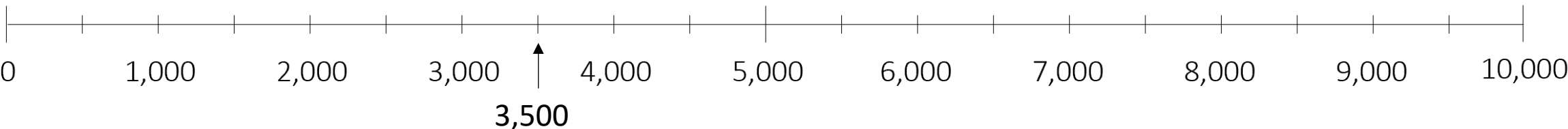
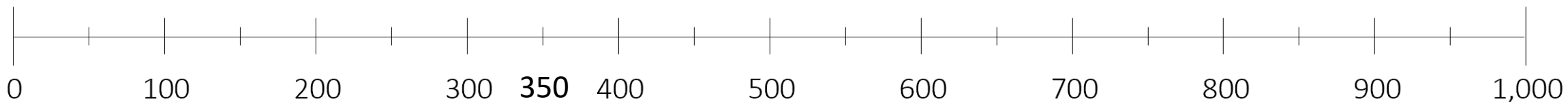
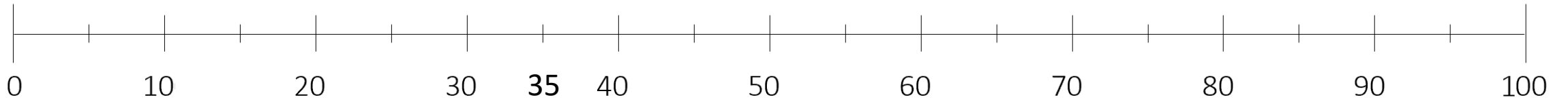


1,000

“10 hundreds are equivalent to 1,000.”



Quality First Teaching: An example of access strategies



Quality First Teaching: Access Strategies

So lesson sense check:

- Coherence
- Manipulatives and representations
- Language structures

Quality First Teaching

“High quality initial instruction will reduce the work that feedback needs to do”

1

Lay the foundations for effective feedback

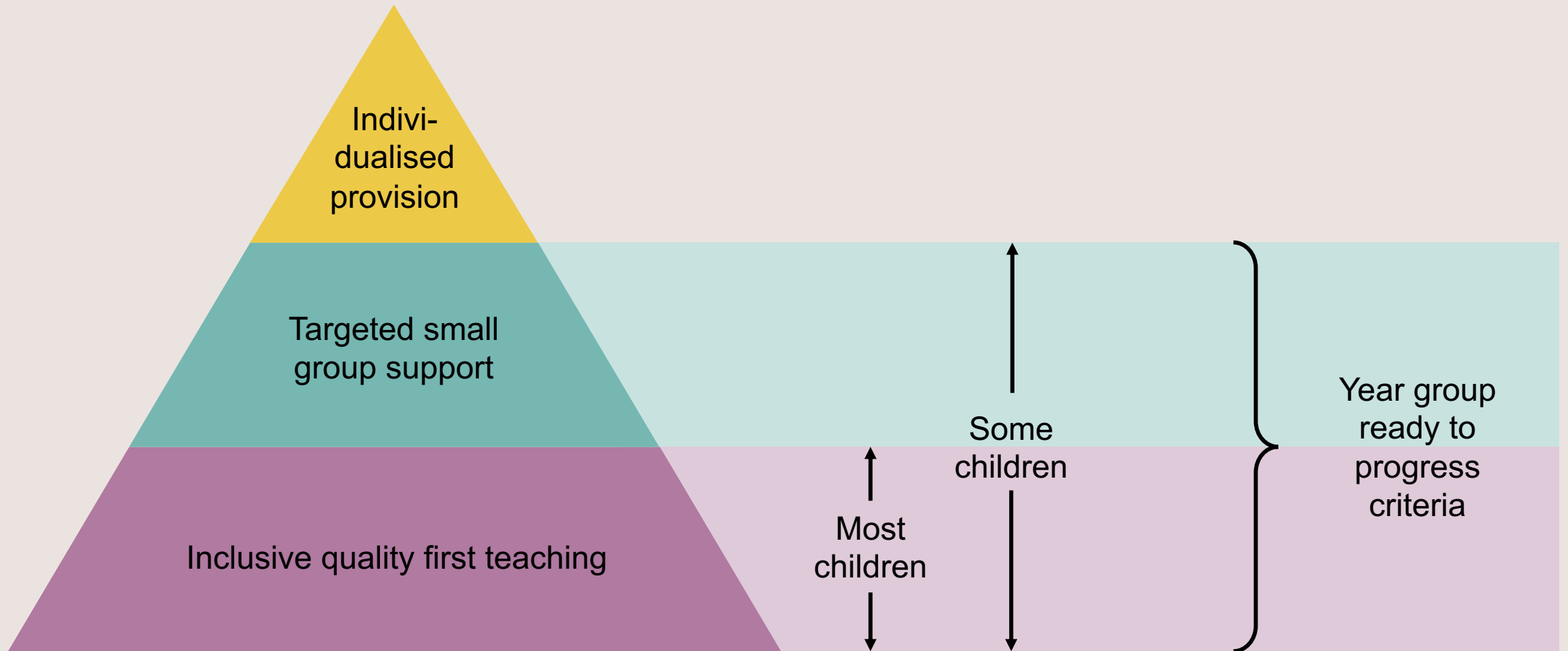


- Before providing feedback, teachers should provide high quality instruction, including the use of formative assessment strategies.
- High quality initial instruction will reduce the work that feedback needs to do; formative assessment strategies are required to set learning intentions (which feedback will aim towards) and to assess learning gaps (which feedback will address).

In delivering effective teaching, teachers:

- build on pupils' prior knowledge and experience;
- avoid overloading pupils' working memory by breaking down complex material into smaller steps;
- encourage the retention of learning by using repetition, practice, and retrieval of critical knowledge and skills;
- deliver a carefully-sequenced curriculum which teaches essential concepts, knowledge, skills, and principles;
- use powerful analogies, illustrations, examples, explanations, comparisons, and demonstrations;
- are aware of common misconceptions and prepare strategies to counter them;
- plan effective lessons, making good use of modelling, explanations, and scaffolds to support learning;
- adapt teaching in a responsive way to support struggling and excelling learners while maintaining high expectations for all (Early Career Framework);²⁰ and
- provide pupils with tools and strategies to plan, monitor, and evaluate their learning.²¹

A tiered approach to maths provision



Targeted small group support: prompts for leaders

What are pupils missing by spending time away from the class?

How does a pupil's experience in an intervention relate to whole-class teaching?

Is this the right intervention for the pupil?

Can we provide the support required for our staff to deliver the intervention well?

Are we able to dedicate the time and resources required to implement the intervention well?

Source: Special Educational Needs in the Mainstream School, from Recommendation 4 (EEF)

Targeted small group support

Teacher led

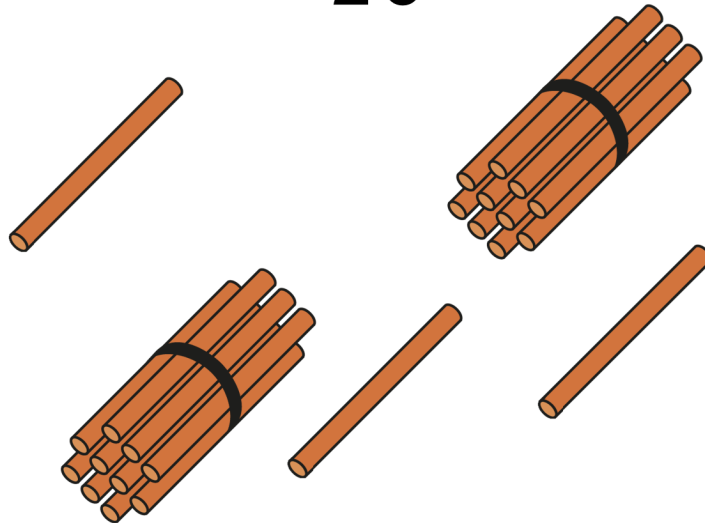
- 2 x 20 minute sessions a week
- Happens continually through the year
- Pre teaching ideal
- Tied to content being covered in class at that time.
- Using same models, images and language as whole class teaching.
- The PowerPoints give a backbone, supplemented with corresponding concrete manipulatives.

LSA led

Targeted small group support: teacher led sessions

2NPV-1 Place value in two-digit numbers

23





- Have we still got 23 straws?
- How do you know?
- Does it matter how we arrange our 2 tens and 3 extra ones?
- Now make your own number with straws, re-arrange it and ask your friend to say your number. Take turns to practise!

We can re-arrange the objects but the total number of objects stays the same.



Targeted small group support: teacher led sessions



**Supporting children to be active
and influential participants in
mathematics lessons through
effective use of assigning
competence and pre-teaching**

Final Report July 2017

Report of an action research project

Babcock LDP



Ruth Trundley

Carolyn Wreghitt

Helen Edginton

Helen Eversett

Stefanie Burke



Targeted small group support

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LSA led

Tiered Provision: Prompts for leaders

- 5 Use TAs to deliver high quality one-to-one and small group support using structured interventions
- 6 Adopt evidence based interventions to support TAs in their small group and one-to-one instruction
- 7 Ensure explicit connections are made between learning from everyday classroom teaching and structured interventions

Source: *Making Best Use of Teaching Assistants (EEF)*

**MAKING BEST USE OF TEACHING ASSISTANTS
RECOMMENDATIONS SUMMARY**

The effective use of TAs in delivering structured interventions out of class	Integrating learning from work led by teachers and TAs	
5 Use TAs to deliver high quality one-to-one and small group support using structured interventions	6 Adopt evidence-based interventions to support TAs in their small group and one-to-one instruction	7 Ensure explicit connections are made between learning from everyday classroom teaching structured interventions
 <p>Research on TAs delivering targeted interventions in one-to-one or small group settings shows a consistent impact on attainment of approximately three to four additional months' progress (effect size 0.2–0.3). Crucially, these positive effects are only observed when TAs work in structured settings with high quality support and training. When TAs are deployed in more informal, unsupported instructional roles, they can impact negatively on pupils' learning outcomes.</p>	 <p>Schools should use structured interventions with reliable evidence of effectiveness. There are presently only a handful of programmes in the UK for which there is a secure evidence base, so if schools are using programmes that are 'unproven', they should try and replicate some common elements of effective interventions:</p> <ul style="list-style-type: none">• Sessions are often brief• (20–50mins), occur regularly (3–5 times per week) and are maintained over a sustained period (8–20 weeks). Careful timetabling is in place to enable this consistent delivery• TAs receive extensive training from experienced trainers and/or teachers (5–30 hours per intervention)• The intervention has structured supporting resources and lesson plans, with clear objectives• TAs closely follow the plan and structure of the intervention• Assessments are used to identify appropriate pupils, guide areas for focus and track pupil progress. Effective interventions ensure the right support is being provided to the right child• Connections are made between the out-of-class learning in the intervention and classroom teaching (see Rec 7).	 <p>Interventions are often quite separate from classroom activities. Lack of time for teachers and TAs to liaise allows relatively little connection between what pupils experience in, and away from, the classroom. The key is to ensure that learning in interventions is consistent with, and extends, work inside the classroom and that pupils understand the links between them. It should not be assumed that pupils can consistently identify and make sense of these links on their own.</p>
Page 19	Page 20	Page 23

Targeted small group support

Tutoring by teaching assistants is more effective if structured and time-limited

Tutoring by teaching assistants is commonly used to support low attaining pupils. This is much more likely to be effective when structured and time-limited. Unstructured support by adults is not effective and can have negative effects.

Targeted small group support

Recruitment completed: Active

1stClass@Number (Accelerator Fund delivery)

Edge Hill University

1stClass@Number is delivered by a trained teaching assistant or teacher to a small group of pupils who have moderate difficulties in mathematics. No more school places available.

Mathematics

Project in Progress

Participating settings: N/A

Effectiveness Trial: Completed

Affordable Maths Tuition

NESTA

Testing the impact of online maths tutoring.

Mathematics

0 Additional months progress
Under everyday conditions

Efficacy Trial: Completed

Catch Up Numeracy

Catch Up

A structured, one-to-one numeracy intervention for pupils struggling with maths

Mathematics

+3 Additional months progress
Under best possible conditions

Effectiveness Trial: Completed

Catch Up Numeracy (re-grant)

Catch Up

One-to-one tailored support delivered by teaching assistants for Key Stage 2 pupils struggling with numeracy

Mathematics

0 Additional months progress
Under everyday conditions

Efficacy Trial: Completed

Improving Working Memory

Oxford University

A small group intervention delivered by Teaching Assistants to improve working memory.

Mathematics

+3 Additional months progress
Under best possible conditions

Efficacy Trial: Completed

onebillion: app-based maths learning

University of Nottingham

Maths learning app monitored by teaching assistants

Mathematics

+3 Additional months progress
Under best possible conditions

Effectiveness Trial: Active

Stop and Think: Learning Counterintuitive Concepts (regrant)

Behavioural Insights Team

A project to test a software programme which uses quizzes and games to help pupils learn counterintuitive concepts in science and maths.

Mathematics

Project in Progress (Retrialled)
Participating settings: 175

Effectiveness Trial: Completed

Tutor Trust - Affordable Tutoring (re-grant)

Tutor Trust

Affordable one-to-one and small group tuition in maths and English

Mathematics

+3 Additional months progress
Under everyday conditions

Targeted small group support

- Features of effective interventions
 - Structured, including training & support
 - Regular, brief and time limited
 - Evidence of impact (pre and post)
 - Implemented with fidelity

Targeted small group support

Teacher led

- 2 x 20 minute sessions a week
- Happens continually through the year
- Pre teaching ideal
- Tied to content being covered in class at that time.
- Using same models, images and language as whole class teaching.
- The PowerPoints give a backbone, supplemented with corresponding concrete manipulatives.

LSA led

- Using the structured programmes we have in school: FunKey & Number Sense Maths
- Timetabled on an as needed basis and agreed with phase lead. May not always have an LSA led maths intervention running.
- May not tie into content covered at that time, but correspond to core NPV & NF criteria
- For children with learning passports, their LP target should be the corresponding RtP criterion (see next slides)

Targeted small group support: LSA led

FunKey

Counting unit	1NPV–1 Count within 100, forwards and backwards, starting with any number
Place value unit	2NPV–1 Recognise the place value of each digit in two-digit numbers, and compose and decompose two-digit numbers using standard and nonstandard partitioning.
Doubles unit	3MD–1 Apply known multiplication and division facts to solve contextual problems with different structures, including quotitive and partitive division.
Times table unit	4NF–1 Recall multiplication and division facts up to 12 x 12, and recognise products in multiplication tables as multiples of the corresponding number. 4MD–2 Manipulate multiplication and division equations, and understand and apply the commutative property of multiplication.

Targeted small group support: LSA led

Number Sense Maths

- Stage 2 1AS–1 Compose numbers to 10 from 2 parts, and partition numbers to 10 into parts, including recognising odd and even numbers.
- Stage 3 1NF–1 Develop fluency in addition and subtraction facts within 10.
- 2NF–1 Secure fluency in addition and subtraction facts within 10, through continued practice.
- Stage 5 2AS–1 Add and subtract across 10.
- 3NF–1 Secure fluency in addition and subtraction facts that bridge 10, through continued practice
- Stage 6 2AS–3 Add and subtract within 100 by applying related one-digit addition and subtraction facts: add and subtract only ones or only tens to/from a two digit number.

1NPV-1 Count forwards and backwards within 100



Targeted small group support

I did the counting forwards and backwards to 100 with A today and it was really interesting. She was absolutely fine going forwards but found backwards really tricky with lots of pausing.

Mistakes made:

She initially couldn't count backwards from 100 to 99 to 98 without support

She went straight from 46 to 43

She went from 41 back up to 50

She went from 30 to 20

She went from 21 straight to 19

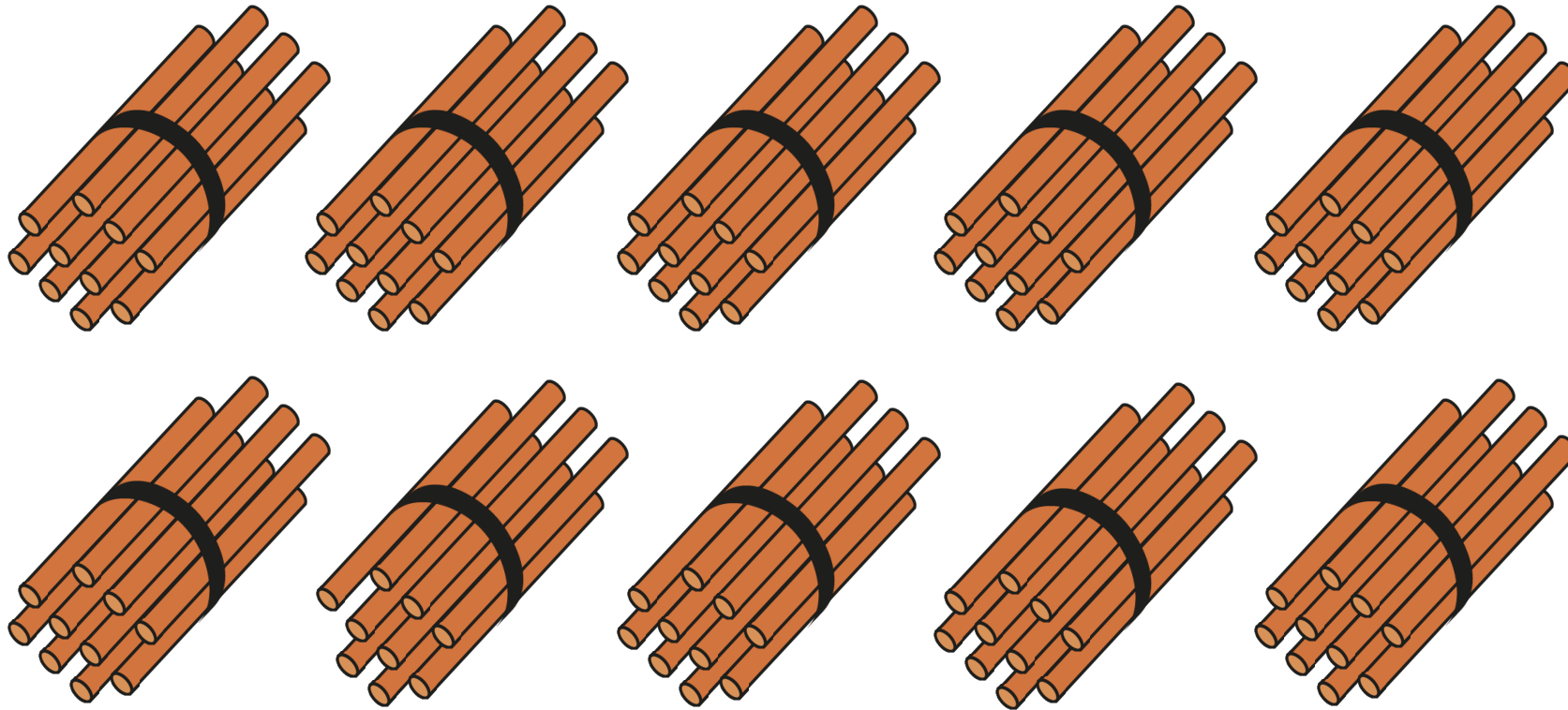
She needed prompting for one less than each multiple of 10 (90, 89 etc)

Targeted (small group) support

“Find out what they don’t know
and teach it to them.”

100	50
99	49
98	48
97	47
96	46 Prompt
95	45
94	44
93	43
92	42
91	41
90	40
89 Prompt	39 2 seconds
88	38
87	37
86	36
85	35
84	34
83	33
82	32
81	31
80	30
79 2 secs	29
78	28
77	27
76	26
75	25
74	24
73	23
72 Prompt	22
71	21
70	20
69	19 Prompt
68 Prompt	18
67	17
66	16 5 seconds
65	15
64	14
63	13
62	12
61	11
60	10
59	9
58	8
57	7
56	6
55	5
54	4
53	3
52	2
51	1
	0

1NPV-1 Count forwards and backwards within 100



- Begin by using real straws to count and bundle together in groups of 10.

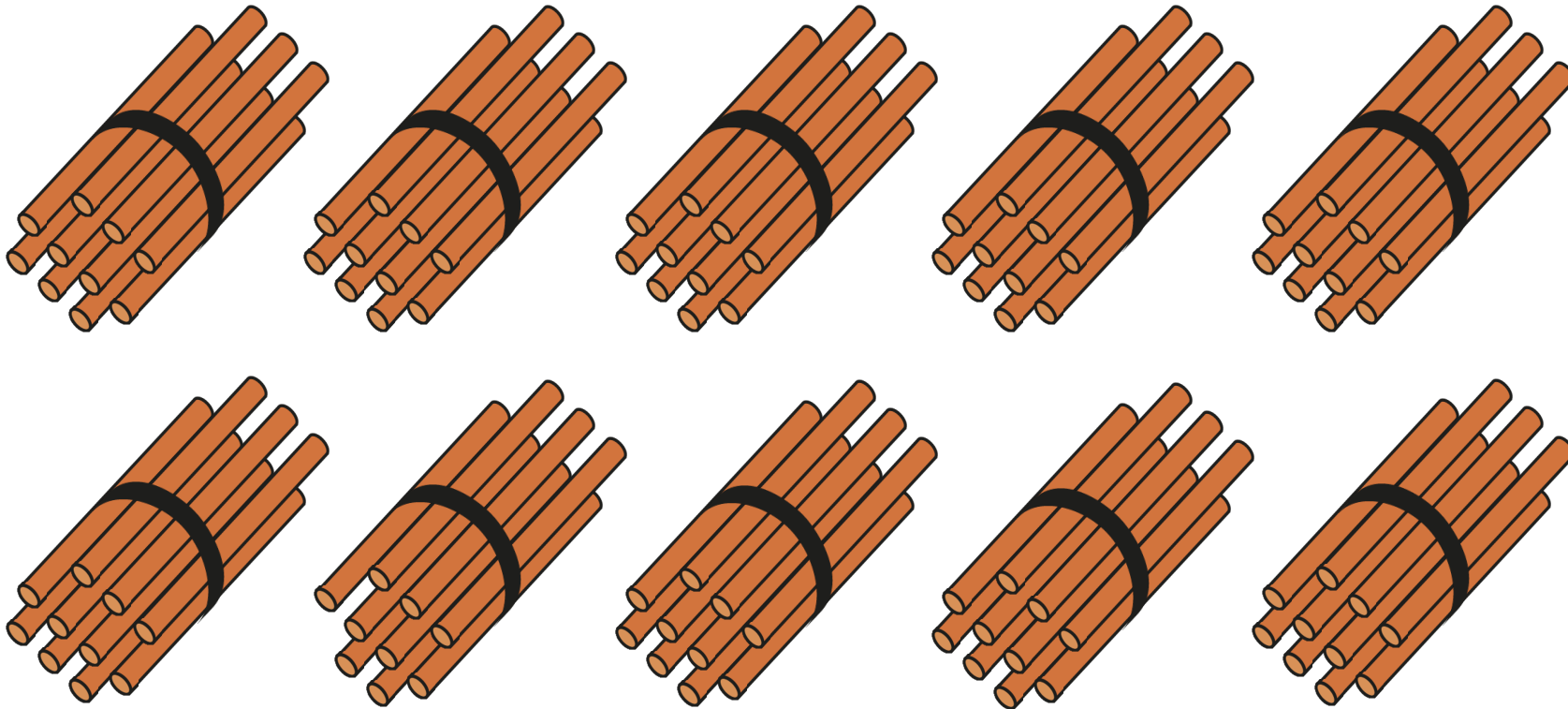
Seven, eight, nine, ten, eleven, twelve... twenty, twenty-one, twenty-two...

Seven, eight, nine, ten, one-ten, one-ten-one, one-ten-two... two-tens, two-tens-one, two-tens-two...

- Can you count in ones between 1 and 100, both forwards and backwards?
- Can you start your count from different numbers?
- Can you say the number of straws each time a bundle is tied up? Louder!
- Are you saying the 'teen numbers' clearly?
- Can you say the count in two ways?



1NPV-1 Count forwards and backwards within 100



1NPV-1 Count forwards and backwards within 100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	42	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

- Can you count forwards and backwards between 1 and 100, starting in different places on the 100 square?
- Can you say the 'teen' part of these numbers a little louder? *Thirteen, fourteen, fifteen...*
- Can you say the numbers which come after these numbers: 19..., 29..., 39..., 99...? Say them loudly and clearly: *twenty, thirty, forty...*
- Can you say the numbers which come before these numbers: 30, 50, 70, 100?
- Where on the 100 square can you see the counting numbers which come before 21, 31, 41...?



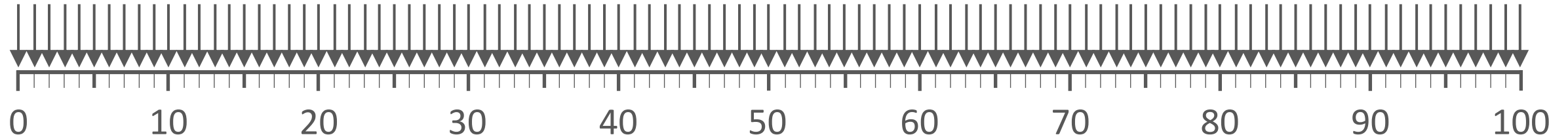
1NPV-1 Count forwards and backwards within 100



- Can you join in saying the numbers in the count?
- Are you saying these numbers very clearly: 14/40, 15/50, 16/60 etc?
- Watch the 'ones digit' as it changes - what do you notice?
- Now watch the 'tens digit' - what do you notice?
- Pause at some numbers and think about what comes next.
- Can you count backwards, especially from these numbers: 20, 30, 40, 50, 60...?



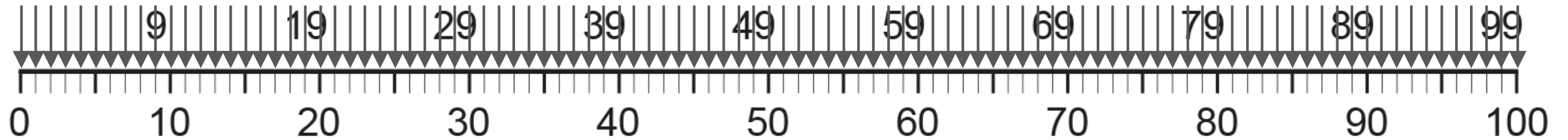
1NPV-1 Count forwards and backwards within 100



- Can you read the numbers shown on the number line between zero and one hundred?
- What do you notice about these numbers?
- Can you join in with the count as the arrow moves along the line? Say the numbers shown on the number line a little louder!
- Move the arrow to different places on the number line - can you work out the number which the arrow has stopped at by counting on or back from the numbers shown on the line? Use a large class number line if possible where children can touch a point and identify the number.



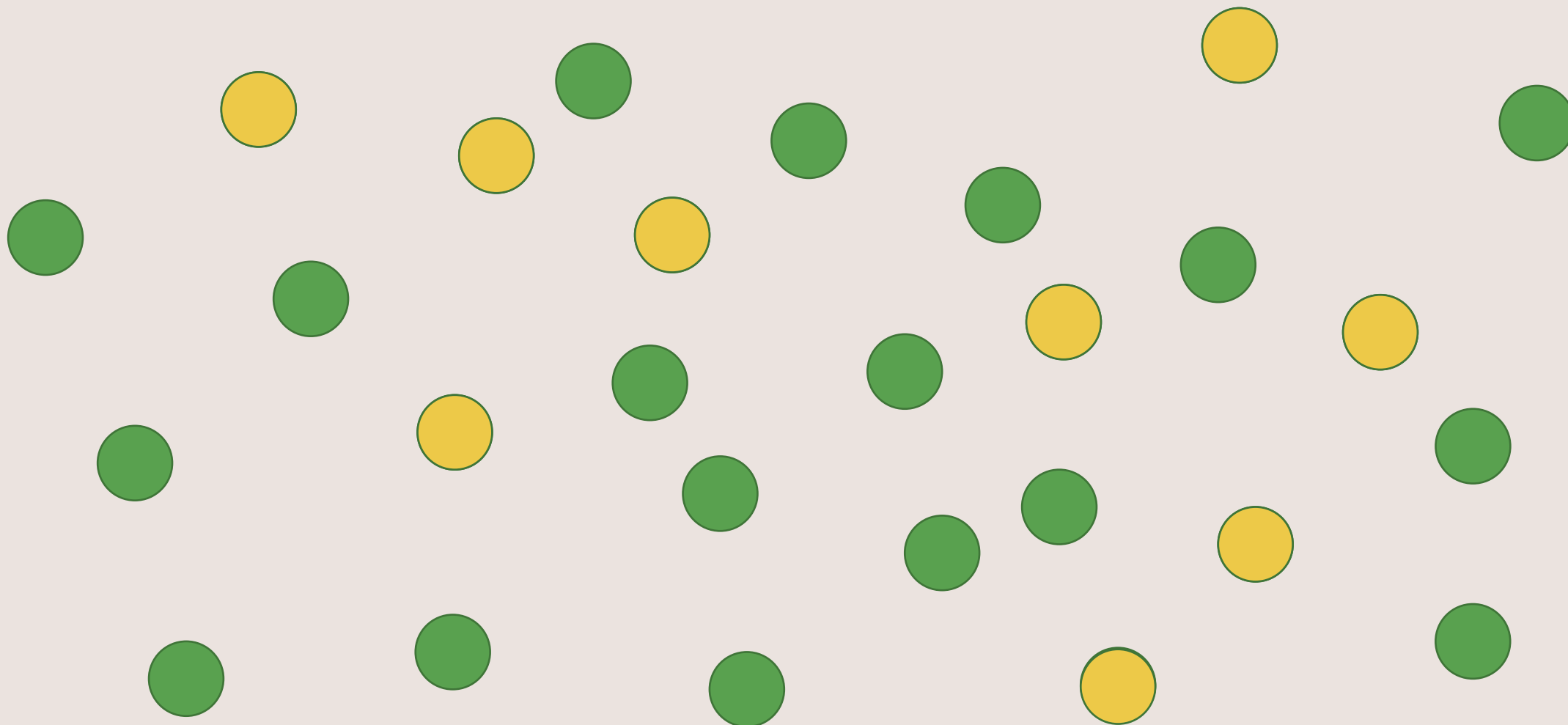
1NPV-1 Count forwards and backwards within 100



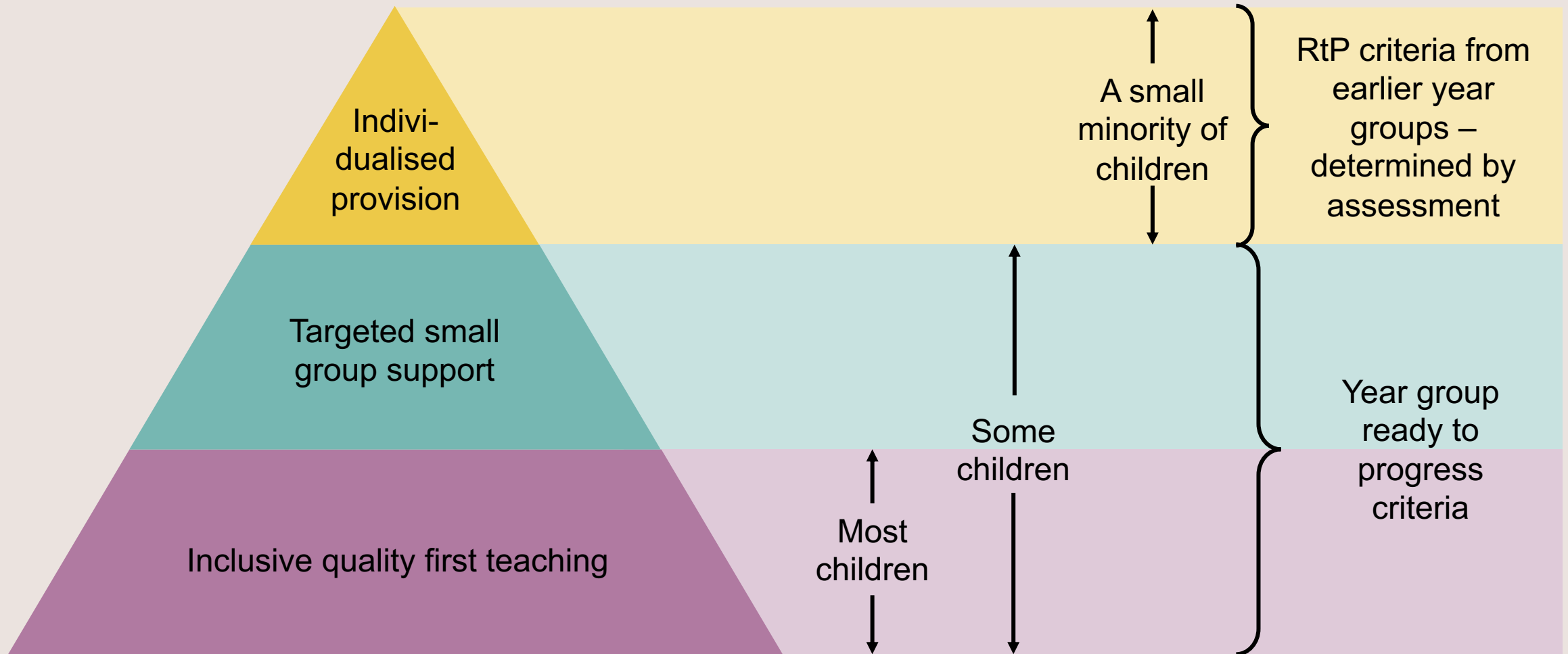
- What do you notice about the numbers written *below* the number line?
- What do you notice about these numbers written *above* the number line?
- Why might it be tricky to remember what comes before these numbers: 20, 30, 40, 50 etc?



Identifying underlying SEND



A tiered approach to maths provision



Individualised Provision

- For pupils who, even with inclusive quality first teaching and targeted small group support, are not able to access the year group curriculum
- Driven by fine grained assessment, starting the 'assess, plan, do, review' cycle
- Focused entirely on securing the RtP criteria from the child's starting point
- Planned and reviewed by teacher, LSA led
- The RtP criterion being taught is the child's ITP/LP target
- The aim is for child to make accelerated progress so they can access whole class provision.

Individualised Provision: fine grained assessment

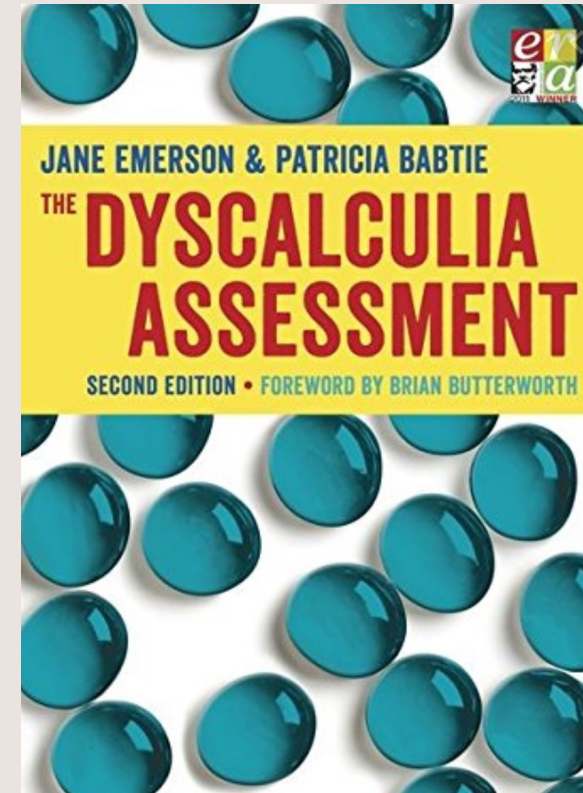
3NF–3 Example assessment questions

1. A garden table costs £80 and 2 garden chairs each cost £60. How much do the 2 chairs and the table cost altogether?
2. 130 people are expected at a concert. So far 70 people have arrived. How many more people are due to arrive?
3. A family ticket for a safari park is £40. 3 families go together. How much do the 3 family tickets cost altogether?
4. Fill in the missing numbers.

$30 + \square = 110$

$7 \times 60 = \square$

Guidance provides example questions suitable for assessing most children



Supports fine grained assessment for children following individualised curriculum

Individualised Provision: working at Year 1 or beyond

1NPV1 Count within 100, forwards and backwards, starting with any number.

4 can do fluently 3 can do correctly with some effort 2 can do correctly with lots of effort 1 can't always do correctly yet 0 not starting

	Wk1	Wk2	Wk3	Wk4	Wk5	Wk6	Wk7
a) Count forwards in ones to 25	3	4					
b) Count forwards in ones to 100	2	3 Noticeably less effort to bridge 10s					
c) Say one more than any number (except a number with 9 ones)	0	1 Can do if start with what is one more than 7? What is one more than 37?					
d) Say ten more than a multiple of 10 (you say 70, pupil says 80) (1NF2 link)	1 Quite often needs bundles of straws for support – laid out 5s wise pattern	3					
e) Say one more than a number with 9 ones (you say 79, they say 80)	1	3					
f) Count backwards in ones from 25	1	2					
g) Count backwards in ones from 100	0 Kept reverting to forwards, 48, 47, 46, 47, 48, 49	1 Didn't go forward, could bridge some tens					
h) Say one less than any number (except a multiple of 10)	0	1 Can do if start with what is one less than 7? What is one less than 37?					
i) Say ten less than a multiple of 10 (you say 70, pupil says 60) (1NF2 link)	1 Quite often needs bundles of straws for support – laid out 5s wise pattern	2					
j) Say one less than a multiple of 10 (you say 70, they say 69)	0	1 Sometimes says the same 10, 60, 69 not 60, 59 but starting to 5, 6					

Y1 RtP criterion broken down into small steps for Y4 pupil

All individualised teaching focused on this one criterion, which is her Learning Passport target

Easy to see progress and plan new teaching activities

Teaching followed by independent practice of steps in this target, and of previously mastered targets

Individualised Provision: working at Year 1 or beyond

xx maths – Term 2 Week 2

	Day 1	Day 2	Day 3	Day 4
Counting	Continue daily prac of counting back from 100, with 100 square available for support as needed. Practise counting back from any number to 100 (just saying first 4 or 5 numbers to check xxx can start from numbers other than 100, e.g. you say 68, she says 67, 66, 65, 64. Then stop her and give another number to count back from. Great job on this one overall! (This is RtP , 1NPV-1 Count within 100, forwards and backwards, starting with any number.)			
Counting notes:				
Main teaching	Start 1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using $<$ $>$ and $=$. Will quite quickly move onto 2NPV-1 Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10. Assessment showed xxx was confident with marked but unlabelled 0 – 20 number lines. Use yellow laminated no line to continue practice on this. Now teaching her to use unmarked number lines to estimate numbers. Use two 10cm lengths of card to estimate length of items (as shown in guidance) then measure with a ruler to check. Write simple table in xxx's book for her to estimate (with unmarked 10 cm strips) then measure (with a ruler) length of small items with as ind work (just need a selection of these in a basket for next couple of weeks).			
Main teaching notes:				

Teacher reviews weekly against fine grained tracking sheet

Very simple teaching plan for following week then written

LSA fills in daily notes (handwritten)

LSA uses the guidance for that single RtP criterion to get 'big picture'

Fine grained tracking sheet (previous page) guides LSA in progression

Individualised Provision: working at Year 1 or beyond

Planning & teaching support

1NPV-1 Count forwards and backwards within 100

Count within 100, forwards and backwards, starting with any number.

1NPV-1 Teaching guidance

Counting to and across 100, forwards and backwards, is a skill that will need to be practised regularly throughout year 1. Counting provides a good opportunity to link number names to numerals, and to the position of numbers in the linear number system. Practice should include:

- reciting number names, without the support of visual representations, to allow pupils to focus on and develop fluency in the verbal patterns
- counting with the support of visual representations and gestural patterns, for example pupils can point to numerals on a 100 square or number line, or tap out the numbers on a Gattegno chart
- starting the counting sequence with numbers other than 1 or 100

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Figure 3: 100 square

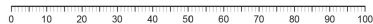


Figure 4: 0 to 100 number line

1NPV1 Count within 100, forwards and backwards, starting with any number.

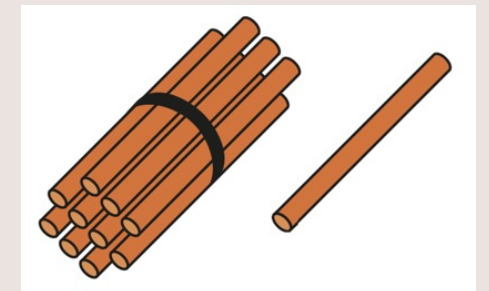
4 can do fluently	3 can do correctly with some effort	2 can do correctly with lots of effort	1 can't always do correctly yet	0 not starting		
WK1	WK2	WK3	WK4	WK5	WK6	WK7
a) Count forwards in ones to 25	3	4				
b) Count forwards in ones to 100	2	3	1. Occasionally has effort to bridge 20s			
c) Say one more than any number (except a number with 9 ones)	0	1	1. Can do if start with what is one more than 79 (that is over more than 100)			
d) Say ten more than a multiple of 10 (you say 70, pupil says 80) (1NF2 link)	1	2	1. Quite often needs hundreds of ones for support - link out to other patterns			
e) Say one more than a number with 9 ones (you say 79, they say 80)	1	3				
f) Count backwards in ones from 25	1	2				
g) Count backwards in ones from 100	0	1	1. Not up forward, could bridge some ones			
h) Say one less than any number (except a multiple of 10)	0	1	1. Can do if start with what is one less than 77 (what is one less than 100?)			
i) Say ten less than a multiple of 10 (you say 70, pupil says 60) (1NF2 link)	1	2	1. Quite often needs hundreds of ones for support - link out to other patterns			
j) Say one less than a multiple of 10 (you say 70, they say 69)	1	0	1. Sometimes says the same 10, 95, 89 not 80. Other starting 10 to 69			

xx maths – Term 2 Week 2

	Day 1	Day 2	Day 3	Day 4
Counting	Continue daily prac of counting back from 100, with 100 square available for support as needed. Practise counting back from any number to 100 (just saying first 4 or 5 numbers to check xxx can start from numbers other than 100, e.g. you say 68, she says 67, 66, 65, 64. Then stop her and give another number to count back from. Great job on this one overall! (This is 8PP 1NPV-1 Count within 100, forwards and backwards, starting with any number.)			
Counting notes:				
Main teaching	Start 1NPV-2 Reason about the location of numbers to 20 within the linear number system, including comparing using < > and =. Will quite quickly move onto 2NPV-1 Reason about the location of any two-digit number in the linear number system, including identifying the previous and next multiple of 10. Assessment showed xxx was confident with marked but unlabelled 0 – 20 number lines. Use yellow laminated no line to continue practice on this. Now teaching her to use unmarked number lines to estimate numbers. Use two 10cm lengths of card to estimate length of items (as shown in guidance) then measure with a ruler to check. Write simple table in xxx's book for her to estimate (with unmarked 10 cm strips) then measure (with a ruler) length of small items with as pdg work (just need a selection of these in a basket for next couple of weeks).			
Main teaching notes:				

Representations & manipulatives

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

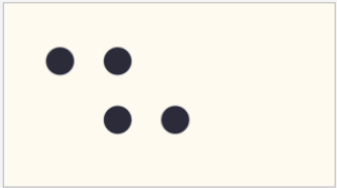


- Coherence
- Representation
- Language

Individualised Provision: working at pre-KS1

Book 1 Subitising 1 and 2	Book 2 Subitising 1 to 3	Book 3 Subitising 1 to 4	Book 4 Subitising 1 to 5	Book 5 Subitising 6 to 10
Book 6 Partitioning 2	Book 7 Partitioning 3	Book 8 Partitioning 4	Book 9 Partitioning 5	Book 10 Partitioning 10
Book 11 Composition of 6 to 9	Book 12 Comparing quantities to 10	Book 13 Patterns in numbers to 10		

Individualised Provision: working at pre-KS1



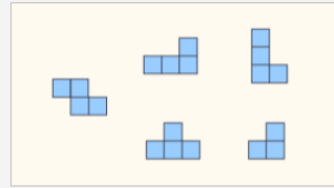
Lots of fours

Four dots, arranged in different ways. See how four can always be moved into a square shape. First half has no numerals. Second half repeats animation with the numeral 4 displayed.



Four of something

Four boats, four trees, four buns and more! Encourage children to say these as they see the image, to link the spoken number name "four" with the quantity. See how four can always be moved into a square shape. First half has no numerals. Second half repeats animation with the numeral 4 displayed.



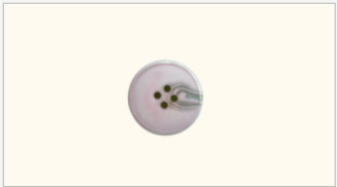
Tetrominoes

Provides more experience of four-ness. In the first half, spot the matching pair of tetrominoes. In the second half, move a tile to change one tetromino to another. Lots of opportunity for positional language and spatial reasoning.



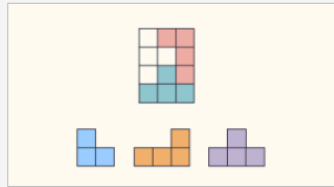
Three or four?

Which is it? Say what you see. Practise distinguishing three from four by subitising, and linking number names to these quantities. First half has no numerals. Second half repeats animation with the numeral 3 or 4 displayed.



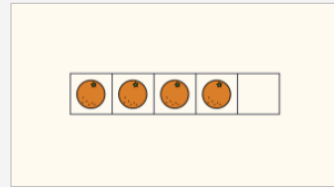
How many?

Practise subitising one, two, three and four, and linking number names to these quantities. There is not always a clear answer: some images contain both one-ness and four-ness for example, and are chosen to promote discussion.



Which piece?

Children will need to subitise up to four, and mentally rotate pieces to work out which fits the template. Lots of opportunity for positional language and spatial reasoning.

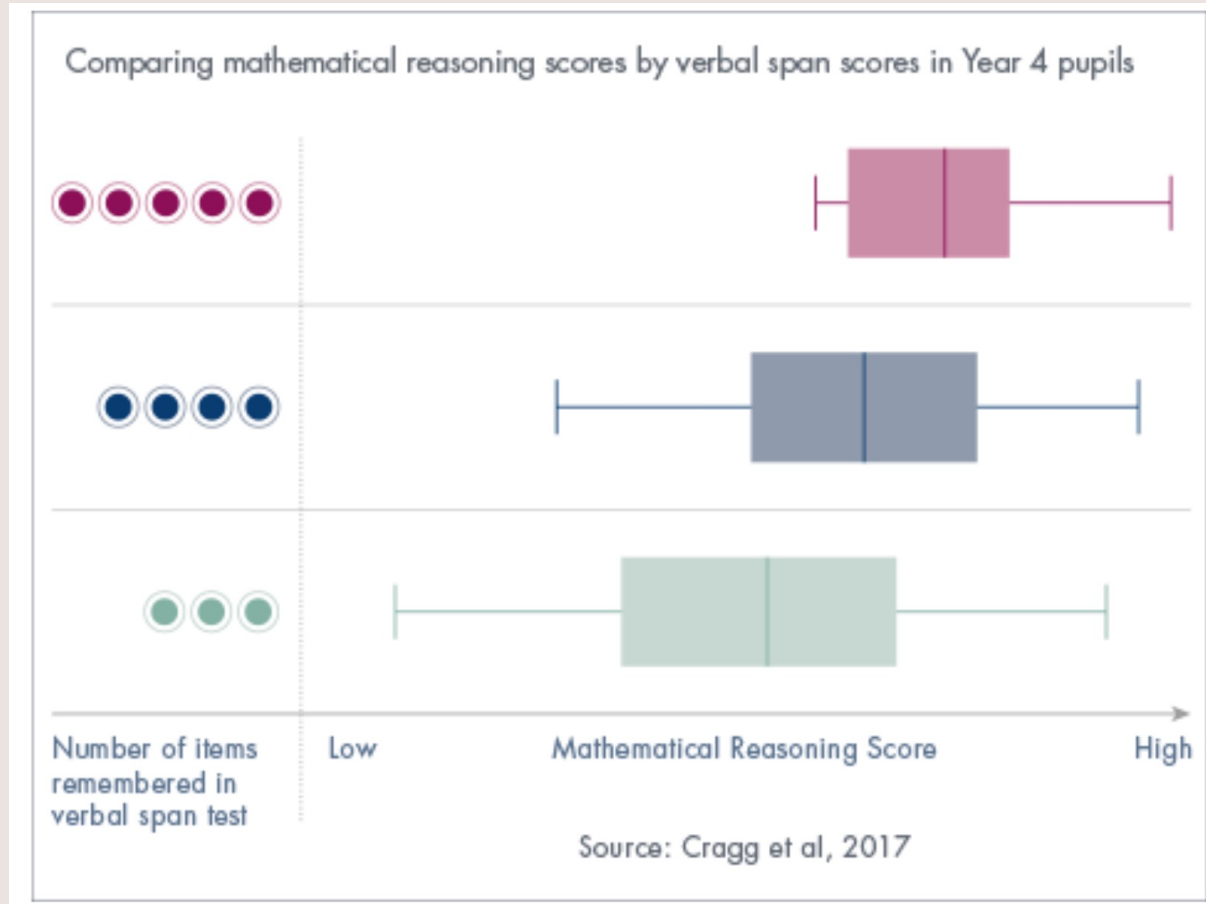


Five frame

One, two, three or four organised on a five frame. Subitise the quantity and hold up the matching number of fingers. First half has no numerals. Second half repeats animation with the numeral 1, 2, 3 or 4 displayed.

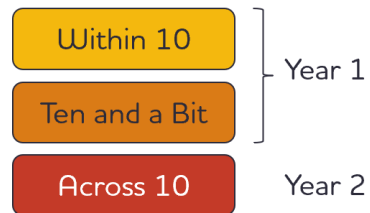
- Coherence
- Representation
- Language

Working memory and mathematical attainment



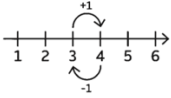

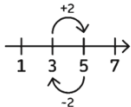
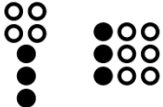
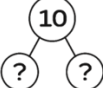
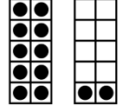

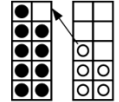

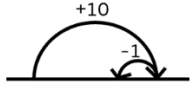

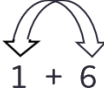
Quality First Teaching: Factual fluency

+	0	1	2	3	4	5	6	7	8	9	10
0	0+0	0+1	0+2	0+3	0+4	0+5	0+6	0+7	0+8	0+9	0+10
1	1+0	1+1	1+2	1+3	1+4	1+5	1+6	1+7	1+8	1+9	1+10
2	2+0	2+1	2+2	2+3	2+4	2+5	2+6	2+7	2+8	2+9	2+10
3	3+0	3+1	3+2	3+3	3+4	3+5	3+6	3+7	3+8	3+9	3+10
4	4+0	4+1	4+2	4+3	4+4	4+5	4+6	4+7	4+8	4+9	4+10
5	5+0	5+1	5+2	5+3	5+4	5+5	5+6	5+7	5+8	5+9	5+10
6	6+0	6+1	6+2	6+3	6+4	6+5	6+6	6+7	6+8	6+9	6+10
7	7+0	7+1	7+2	7+3	7+4	7+5	7+6	7+7	7+8	7+9	7+10
8	8+0	8+1	8+2	8+3	8+4	8+5	8+6	8+7	8+8	8+9	8+10
9	9+0	9+1	9+2	9+3	9+4	9+5	9+6	9+7	9+8	9+9	9+10
10	10+0	10+1	10+2	10+3	10+4	10+5	10+6	10+7	10+8	10+9	10+10



-	0	1	2	3	4	5	6	7	8	9	10
0	0-0										
1	1-0	1-1									
2	2-0	2-1	2-2								
3	3-0	3-1	3-2	3-3							
4	4-0	4-1	4-2	4-3	4-4						
5	5-0	5-1	5-2	5-3	5-4	5-5					
6	6-0	6-1	6-2	6-3	6-4	6-5	6-6				
7	7-0	7-1	7-2	7-3	7-4	7-5	7-6	7-7			
8	8-0	8-1	8-2	8-3	8-4	8-5	8-6	8-7	8-8		
9	9-0	9-1	9-2	9-3	9-4	9-5	9-6	9-7	9-8	9-9	
10	10-0	10-1	10-2	10-3	10-4	10-5	10-6	10-7	10-8	10-9	10-10
11		11-1	11-2	11-3	11-4	11-5	11-6	11-7	11-8	11-9	11-10
12			12-2	12-3	12-4	12-5	12-6	12-7	12-8	12-9	12-10
13				13-3	13-4	13-5	13-6	13-7	13-8	13-9	13-10
14					14-4	14-5	14-6	14-7	14-8	14-9	14-10
15						15-5	15-6	15-7	15-8	15-9	15-10
16							16-6	16-7	16-8	16-9	16-10
17								17-7	17-8	17-9	17-10
18									18-8	18-9	18-10
19										19-9	19-10
20											20-10

Quality First Teaching: Factual fluency

<p>One More, One Less</p> 	<p>When we add one, we get the next counting number. When we subtract one, we get the previous counting number (e.g. $5 - 1 = 4$).</p>	<p>Number Neighbours: Spot the Difference</p> 	<p>Adjacent numbers have a difference of 1. Adjacent odds and evens have a difference of 2.</p> <p>Spot number neighbours (adjacent, odds or evens) to solve subtractions of adjacent numbers (e.g. $5 - 4 = 1$), of adjacent odds (e.g. $9 - 7 = 2$) or adjacent evens (e.g. $6 - 4 = 2$).</p>
<p>Two More, Two Less: Think Odds and Evens</p> 	<p>If we add two to a number, we go from odd to next odd or even to next even. If we subtract two from a number, we go from odd to previous odd or even to previous even.</p>	<p>7 Tree and 9 Square</p> 	<p>Use these visual images to remember addition and subtractions fact families that children can find tricky. For example, visualising the 7 tree helps remember that $7 - 3 = 4$. Visualising the 9 square helps remember that $3 + 6 = 9$.</p>
<p>Number 10 Fact Families</p> 	<p>Go beyond just recalling the pairs of numbers that add to 10. Make sure that we can also spot additions and subtractions which we can use number bonds to 10 to solve.</p>	<p>Ten and A Bit</p> 	<p>The numbers 11 – 20 are made up of 'Ten and a Bit'. Recognising and understanding the 'Ten and a Bit' structure of these numbers enables addition and subtraction facts involving their constituent parts (e.g. $3 + 10 = 13$, $17 - 7 = 10$, $12 - 10 = 2$).</p>
<p>Five and A Bit</p> 	<p>The numbers 6, 7, 8 and 9 are made up of 'five and a bit'. This can be shown on hands, and supports decomposition of these numbers into their five and a bit parts (e.g. $5 + 3 = 8$, $9 - 5 = 4$).</p>	<p>Make Ten and Then...</p> 	<p>Additions which cross the 10 boundary can be calculated by 'Making Ten' first, and then adding on the remaining amount (e.g. $8 + 6$ can be calculated by thinking '$8 + 2 = 10$ and 4 more makes 14'). The same strategy can be applied to subtractions through 10.</p>
<p>Know about 0</p> 	<p>When we add 0 to or subtract 0 from another number, the total remains the same. If we subtract a number from itself, the difference is 0.</p>	<p>Adjust It</p> 	<p>Any addition and subtraction can be calculated by adjusting from a fact you know already, (e.g. $6 + 9$ is one less than $6 + 10$).</p>
<p>Doubles and Near Doubles</p> 	<p>Memorise doubles of numbers to 10, using a visual approach. Then use these known double facts to calculate near doubles and hidden doubles. Once we know $6 + 6 = 12$ then $6 + 7$ and $5 + 7$ is easy.</p>	<p>Swap It</p> 	<p>When the order of two numbers being added (addends) is exchanged the total remains the same. E.g. $1 + 8 = 8 + 1$. Sometimes reversing the order of the two addends makes addition easier to think about conceptually.</p>

Quality First Teaching: Factual fluency

Addition Grid Facts

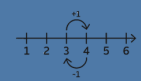
+	0	1	2	3	4	5	6	7	8	9	10
0	0+0	0+1	0+2	0+3	0+4	0+5	0+6	0+7	0+8	0+9	0+10
1	1+0	1+1	1+2	1+3	1+4	1+5	1+6	1+7	1+8	1+9	1+10
2	2+0	2+1	2+2	2+3	2+4	2+5	2+6	2+7	2+8	2+9	2+10
3	3+0	3+1	3+2	3+3	3+4	3+5	3+6	3+7	3+8	3+9	3+10
4	4+0	4+1	4+2	4+3	4+4	4+5	4+6	4+7	4+8	4+9	4+10
5	5+0	5+1	5+2	5+3	5+4	5+5	5+6	5+7	5+8	5+9	5+10
6	6+0	6+1	6+2	6+3	6+4	6+5	6+6	6+7	6+8	6+9	6+10
7	7+0	7+1	7+2	7+3	7+4	7+5	7+6	7+7	7+8	7+9	7+10
8	8+0	8+1	8+2	8+3	8+4	8+5	8+6	8+7	8+8	8+9	8+10
9	9+0	9+1	9+2	9+3	9+4	9+5	9+6	9+7	9+8	9+9	9+10
10	10+0	10+1	10+2	10+3	10+4	10+5	10+6	10+7	10+8	10+9	10+10

Subtraction Grid Facts

+	0	1	2	3	4	5	6	7	8	9	10
0	0-0										
1	1-0	1-1									
2	2-0	2-1	2-2								
3	3-0	3-1	3-2	3-3							
4	4-0	4-1	4-2	4-3	4-4						
5	5-0	5-1	5-2	5-3	5-4	5-5					
6	6-0	6-1	6-2	6-3	6-4	6-5	6-6				
7	7-0	7-1	7-2	7-3	7-4	7-5	7-6	7-7			
8	8-0	8-1	8-2	8-3	8-4	8-5	8-6	8-7	8-8		
9	9-0	9-1	9-2	9-3	9-4	9-5	9-6	9-7	9-8	9-9	
10	10-0	10-1	10-2	10-3	10-4	10-5	10-6	10-7	10-8	10-9	10-10
11		11-1	11-2	11-3	11-4	11-5	11-6	11-7	11-8	11-9	11-10
12			12-2	12-3	12-4	12-5	12-6	12-7	12-8	12-9	12-10
13				13-3	13-4	13-5	13-6	13-7	13-8	13-9	13-10
14					14-4	14-5	14-6	14-7	14-8	14-9	14-10
15						15-5	15-6	15-7	15-8	15-9	15-10
16							16-6	16-7	16-8	16-9	16-10
17								17-7	17-8	17-9	17-10
18									18-8	18-9	18-10
19										19-9	19-10
20											20-10

Calculation Strategies

One More, One Less

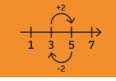


Swap It



1 + 6

Two More, Two Less: Think Odds and Evens



Number 10 Fact Families




Five and A Bit



Know About Zero

0

Doubles and Near Doubles



Number Neighbours: Spot the Difference




7 Tree 9 Square



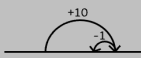
Ten and A Bit



Make 10 and Then



Adjusting



Quality First Teaching: Factual fluency

+	0	1	2	3	4	5	6	7	8	9	10
0	0	0+1	0+2	0+3	0+4	0+5	0+6	0+7	0+8	0+9	0+10
1	1+0	1+1	1+2	1+3	1+4	1+5	1+6	1+7	1+8	1+9	
2	2+0	2+1	2+2	2+3	2+4	2+5	2+6	2+7	2+8		
3	3+0	3+1	3+2	3+3	3+4	3+5	3+6	3+7			
4	4+0	4+1	4+2	4+3	4+4	4+5	4+6				
5	5+0	5+1	5+2	5+3	5+4	5+5					
6	6+0	6+1	6+2	6+3	6+4						
7	7+0	7+1	7+2	7+3							
8	8+0	8+1	8+2								
9	9+0	9+1									
10	10										

Quality First Teaching: Factual fluency

Name Jack Jones

Class 1A

Date 14/11 26/04

Addition Facts observed

	0	1	2	3	4	5	6	7	8	9	10
0	0+0	0+1	0+2	0+3	0+4	0+5	0+6	0+7	0+8	0+9	0+10
1	1+0	1+1	1+2	1+3	1+4	1+5	1+6	1+7	1+8	1+9	
2	2+0	2+1	2+2	2+3	2+4	2+5	2+6	2+7	2+8		
3	3+0	3+1	3+2	3+3	3+4	3+5	3+6	3+7			
4	4+0	4+1	4+2	4+3	4+4	4+5	4+6				
5	5+0	5+1	5+2	5+3	5+4	5+5					
6	6+0	6+1	6+2	6+3	6+4						
7	7+0	7+1	7+2	7+3							
8	8+0	8+1	8+2								
9	9+0	9+1									
10	10+0										

Observation Notes

Know about zero fully secure for +
 Doesn't recognise $3+7$ and $4+6$ and was adding to 10 (but can say '7' when asked what bonds to 10 from 3)
 Can recognise commutativity in $0+3$ etc, but not e.g. $1+4$. Counted on from 1 to get 5.
 Great progress!
 - 1 more and 2 more solid
 - Recognises all bonds to 10 and doubles
 - Can apply commutativity now, except didn't recognise $3+5$ and $4+5$ as five and a bit (though fine for $5+3$ and $5+4$)

Follow-up plan

Note – this should focus only on strategies that have been taught but not applied. No need to focus on strategies not taught yet.

- Gap teach - commutativity for 1 more e.g. $1+4$
- Gap teach - recognise addition pairs which make 10 when presented among facts which don't add to 10.
- Gap teach - near doubles
- Gap teach - five and a bit - applying to $3+5$ and $4+5$

Strategies observed

One More, One Less ✓

Two More, Two Less: Think Odds and Evens ✓

Number 10 fact families ✓

Five and A Bit ✓

Doubles and near doubles ✓

7 tree 9 square ✓

Know about zero ✓

Swap it ✓

Some evidence ✓
 Secure ✓
 D but no ND ✓

Quality First Teaching: Factual fluency

2 times
tables

3 times
tables

4 times
tables

5 times
tables

6 times
tables

7 times
tables

8 times
tables

9 times
tables

$2 \times 2 = 4$

$3 \times 2 = 6$

$3 \times 3 = 9$

$4 \times 2 = 8$

$4 \times 3 = 12$

$4 \times 4 = 16$

$5 \times 2 = 10$

$5 \times 3 = 15$

$5 \times 4 = 20$

$5 \times 5 = 25$

$6 \times 2 = 12$

$6 \times 3 = 18$

$6 \times 4 = 24$

$6 \times 5 = 30$

$6 \times 6 = 36$

$7 \times 2 = 14$

$7 \times 3 = 21$

$7 \times 4 = 28$

$7 \times 5 = 35$

$7 \times 6 = 42$

$7 \times 7 = 49$

$8 \times 2 = 16$

$8 \times 3 = 24$

$8 \times 4 = 32$

$8 \times 5 = 40$

$8 \times 6 = 48$

$8 \times 7 = 56$

$8 \times 8 = 64$

$9 \times 2 = 18$

$9 \times 3 = 27$

$9 \times 4 = 36$

$9 \times 5 = 45$

$9 \times 6 = 54$

$9 \times 7 = 63$

$9 \times 8 = 72$

$9 \times 9 = 81$

36
facts

Targeted support: Factual fluency

3×2	7×4	6×3	
4×3	6×6	2×2	
9×6	8×2	7×3	
5×2	4×4	6×5	8×6
5×3	8×3	7×6	9×4
7×5	6×2	3×3	8×7
6×4	5×5	9×3	9×8
8×5			9×7
5×4	9×9	9×2	
7×7		8×8	
	4×2		

Targeted support: Factual fluency

2×2 ✓							
3×2 ✓	3×3 ✓						
4×2	4×3 ✓	4×4 ✓					
5×2 ✓	5×3 ✓	5×4	5×5 ✓				
6×2 ✓	6×3	6×4	6×5	6×6 ✓			
7×2	7×3	7×4	7×5 ✓	7×6 ✓	7×7 ✓		
8×2	8×3	8×4	8×5	8×6	8×7	8×8 ✓	
9×2 ✓	9×3 ✓	9×4 ✓	9×5	9×6 ✓	9×7	9×8	9×9 ✓

Targeted support: Factual fluency

Name My Times Table Progress Sheet

Week	Date	Number of facts I know (out of 36)	Number of facts still to learn (out of 36)	Fact I will learn this week	Week	Date	Number of facts I know (out of 36)	Number of facts still to learn (out of 36)	Fact I will learn this week
1	11 ^m Oct	16	20	$6 \times 6 = 36$	9	13 th Dec 2021	28	8	$9 \times 3 = 27$ $7 \times 5 = 35$
2	2 nd Nov	21	14	$9 \times 8 = 72$	10	10 ^m Jan	29	7	$7 \times 7 = 49$
3	8 th Nov	22	14	$8 \times 7 = 56$	11	17 th Jan 2022	30	6	$9 \times 4 = 36$
4	12 th Nov	23	13	$8 \times 4 = 32$	12	24 th Jan 2022	32	4	$8 \times 3 = 24$
5	15 th Nov	24	12	$8 \times 8 = 64$	13	- Jan 2022	34	2	$9 \times 4 = 36$ $+ 8 \times 3 = 24$
6	17 th Nov	25	11	$9 \times 5 = 45$	14	7 th Feb 2022	34	2	$9 \times 4 = 36$ $8 \times 3 = 24$
7	18 th Nov	28	11	$9 \times 7 = 63$	15	14 Feb	35	1	$9 \times 7 = 63$
8	29 th Nov	26	9	$9 \times 9 = 81$	16				

9 1/2

9 x 6

9 x 7

Practical tips for subject leaders

- High quality Early Years and Year 1 provision is essential to highlight SEND
- Three access strategies are clearly set out in the RtP guidance (all highlighted in RtP):
 - Coherence
 - Representation
 - Language
- Aim for clear pathways with consistent provision on each
- Match targets and provision carefully, and monitor against these closely. The vast majority of children will make good progress with explicit teaching of a concept.
- Interventions led by TAs should be structured and time limited. *“Unstructured support by adults is not effective and can have negative effects”*
- Focus on factual fluency

Useful things people told me

“Find out what they don’t know and teach it to them”

“It’s all about having a good system”

“Without quality first teaching, everything else is a sticking plaster”

“If you get it right for children with SEND you get it right for everyone”

Thoughts so far?