

Progression in learning Number Facts KS1 Parent Workshop

7.3.2024

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Areas addressed

- **Number bonds to ten**
- **Consolidation and practice of number bonds to ten**
- **Reinforcing table facts**
- **Rapid Recall of multiplication facts**

Progression in Number Facts

Addition and Subtraction

Key Stage 1

Number bonds to ten



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<https://www.ncetm.org.uk/classroom-resources/lv-number-facts/>

Reasoning mathematically

Sarah says:

“Reasoning is drip fed into everything that we do”.

What examples of this can we see in the video clip?

Reasoning mathematically is one of the three key aims of the National Curriculum.

Recording number sentences



Now notice how the children were able confidently to record using symbols, once they had a clear understanding from good use of representations.

Consider how understanding and fluency are developed together.

There are 11 ways to make 10

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

Commutativity

$$2 + 8 = 8 + 2$$

What's the same? What's different?

How does the use of the coat hanger support understanding of commutativity?

Understanding commutativity cuts down on the number of facts to learn and supports the development of flexibility and fluency

What other images might you use?

Progression in Number Facts

Addition and Subtraction

Key Stage 1

Consolidation and practice

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Consolidation and practice



Children need time to practise number facts in interesting ways and different environments.

Notice how digital technology provides opportunities for children to attempt many calculations in a short space of time.

Progression in Number Facts

Multiplication Key Stage 1

Reinforcing table facts

Oldway

Video 1.1

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Fluency and understanding



How might the images and techniques used support children's conceptual understanding and lead to fluency in recall of table facts?

Visualisation

Counting in tens on a hundred square

Did you notice how the teacher enables the children to transfer from an actual image to a mental image and uses kinaesthetic movement.

Making connections

Linking multiples of two and multiples of four

What strategies does the teacher use?

Making connections in mathematics has the potential to cut down on the amount of mathematics to learn and deepen conceptual understanding.

Progression in Number Facts

Multiplication Upper Key Stage 2

Rapid recall of multiplication facts

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Identifying tricky facts

Debbie is focusing in on the harder table facts that children might need to consolidate.

Notice how the children apply the strategy of using what they know to derive what they don't know.

Linking multiplication and division

The use of the triangle card game supports making connections between multiplication and division facts.

How might the cards support the concept of division as the inverse of multiplication?



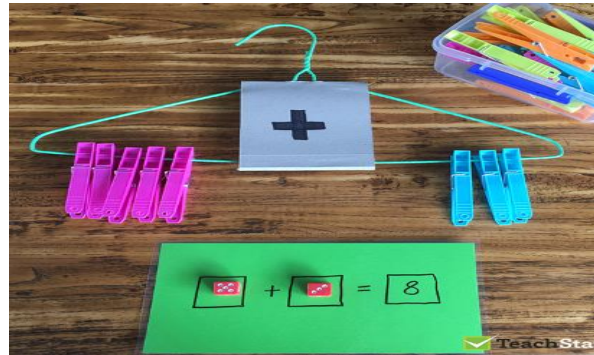
How can you help at home?

- Use everyday resources to represent the learning of bonds to 10 or 20 as well as times tables facts.
- Make connections between the concrete, visual and abstract equations to improve understanding.
- Use Numbots and TTRockstar to give them plenty of practice and consolidation opportunities online.
- Use a range of ways to orally chant/sing to recall facts.
- Know the secure understanding develops fluency.

★ Making 10 ★

●	●	●	●	●
●	●	●	●	●

$\underline{6} + \underline{4} = \underline{10}$



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

 3×4 $4 + 4 + 4$	 4×2 $2 + 2 + 2 + 2$
 4×5 $5 + 5 + 5 + 5$	 2×2 $2 + 2$

Addition Facts Chart

Memorise each fact and assess to see if your child knows each fact instantly.

+	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

<u>Addition Strategies</u>	Doubles Plus Two
Plus/Minus Zero	Making Ten
Doubles	Plus Ten
Doubles Plus One	Plus Nine

Thank you for coming!

