

## Times tables Policy 2023 onwards- Number Sense Maths



The full set of multiplication calculations that pupils need to be able to solve by automatic recall are shown in the table below. Pupils must also have automatic recall of the corresponding division facts. There are 36 essential facts!

1 × 1	1 × 2	1 × 3	1 × 4	1 × 5	1 × 6	1 × 7	1 × 8	1 × 9	1 × 10	1 × 11	1 × 12
2 × 1	2 × 2	2 × 3	2 × 4	2 × 5	2 × 6	2 × 7	2 × 8	2 × 9	2 × 10	2 × 11	2 × 12
3 × 1	3 × 2	3 × 3	3 × 4	3 × 5	3 × 6	3 × 7	3 × 8	3 × 9	3 × 10	3 × 11	3 × 12
4 × 1	4 × 2	4 × 3	4 × 4	4 × 5	4 × 6	4 × 7	4 × 8	4 × 9	4 × 10	4 × 11	4 × 12
5 × 1	5 × 2	5 × 3	5 × 4	5 × 5	5 × 6	5 × 7	5 × 8	5 × 9	5 × 10	5 × 11	5 × 12
6 × 1	6 × 2	6 × 3	6 × 4	6 × 5	6 × 6	6 × 7	6 × 8	6 × 9	6 × 10	6 × 11	6 × 12
7 × 1	7 × 2	7 × 3	7 × 4	7 × 5	7 × 6	7 × 7	7 × 8	7 × 9	7 × 10	7 × 11	7 × 12
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9 × 1	9 × 2	9 × 3	9 × 4	9 × 5	9 × 6	9 × 7	9 × 8	9 × 9	9 × 10	9 × 11	9 × 12
10 × 1	10 × 2	10 × 3	10 × 4	10 × 5	10 × 6	10 × 7	10 × 8	10 × 9	10 × 10	10 × 11	10 × 12
11 × 1	11 × 2	11 × 3	11 × 4	11 × 5	11 × 6	11 × 7	11 × 8	11 × 9	11 × 10	11 × 11	11 × 12
12 × 1	12 × 2	12 × 3	12 × 4	12 × 5	12 × 6	12 × 7	12 × 8	12 × 9	12 × 10	12 × 11	12 × 12

### When are these facts learnt in our academy?

<u>Year 3</u>	<u>Year 3</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 4</u>	<u>Year 4</u>	<u>Year 4</u>	<u>Year 4</u>
2 tt	5tt	3tt	4tt	6tt	7tt	8tt	9tt
2 × 2							
3 × 2	3 × 5	3 × 3					
4 × 2	4 × 5	4 × 3	4 × 4				
5 × 2	5 × 5						
6 × 2	6 × 5	6 × 3	6 × 4	6 × 6			
7 × 2	7 × 5	7 × 3	7 × 4	7 × 6	7 × 7		
8 × 2	8 × 5	8 × 3	8 × 4	8 × 6	8 × 7	8 × 8	
9 × 2	9 × 5	9 × 3	9 × 4	9 × 6	9 × 7	9 × 8	9 × 9
8 facts	7 facts	6 facts	5 facts	4 facts	3 facts	2 facts	1 fact
<b><u>By end of Y3:</u></b>			<b><u>By end of Y4</u></b>				
<b><u>21 facts learnt</u></b>			<b><u>15 facts learnt to complete building blocks</u></b>				
<b><u>15 facts still to learn</u></b>			<b><u>21 more facts for times table check (see below)</u></b>				

### Year 4: 21 more facts

<u>11 × 2</u>	<u>11 × 3</u>	<u>11 × 4</u>	<u>11 × 5</u>	<u>11 × 6</u>	<u>11 × 7</u>	<u>11 × 8</u>	<u>11 × 9</u>	<u>11 × 10</u>	<u>11 × 11</u>	
<u>12 × 2</u>	<u>12 × 3</u>	<u>12 × 4</u>	<u>12 × 5</u>	<u>12 × 6</u>	<u>12 × 7</u>	<u>12 × 8</u>	<u>12 × 9</u>	<u>12 × 10</u>	<u>12 × 11</u>	<u>12 × 12</u>

# Overviews.

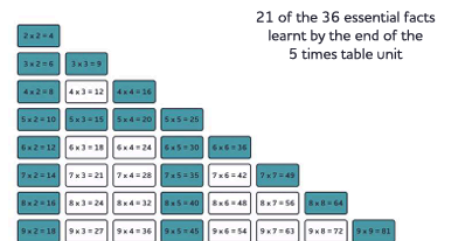
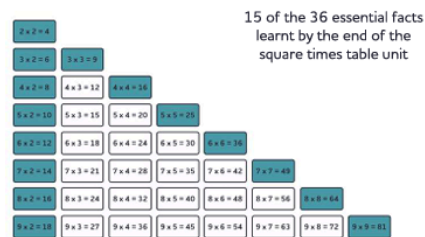
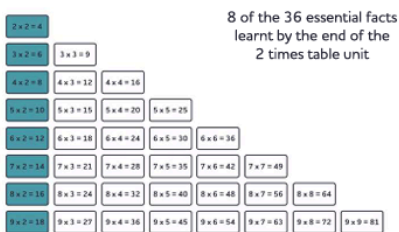
	Autumn	Spring	Summer																										
Year 3		<table border="1"> <tr> <td>Doubles</td> <td>2 Times Table</td> <td>Square Times Table</td> <td>5 Times Table</td> <td>Consolidation</td> </tr> <tr> <td>5 weeks</td> <td>5 weeks (8 facts)</td> <td>5 weeks (7 new facts)</td> <td>5 weeks (6 new facts)</td> <td>3-5 weeks 21 out of 36 facts learnt by end of Year 3</td> </tr> </table>	Doubles	2 Times Table	Square Times Table	5 Times Table	Consolidation	5 weeks	5 weeks (8 facts)	5 weeks (7 new facts)	5 weeks (6 new facts)	3-5 weeks 21 out of 36 facts learnt by end of Year 3																	
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Year 5	Daily consolidation	Weekly consolidation (weekly fluency session and weekly conceptual animation)																											
Year 6	Weekly consolidation																												



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## Year 3 overview

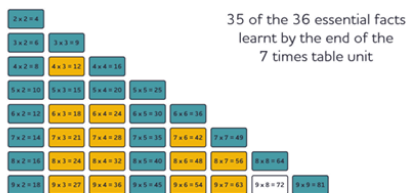
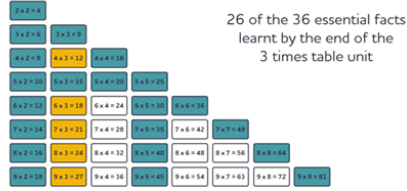
Autumn	Spring	Summer										
	<table border="1"> <tr> <td>Stage 1 Unit 1 Doubles</td> <td>Stage 2 Unit 1 2 Times Table</td> <td>Stage 2 Unit 2 Square Times Table</td> <td>Stage 2 Unit 3 5 Times Table</td> <td>Stage 2 Unit 4 Consolidation</td> </tr> <tr> <td>5 weeks</td> <td>5 weeks (8 facts)</td> <td>5 weeks (7 new facts)</td> <td>5 weeks (6 new facts)</td> <td>3-5 weeks 21 out of 36 facts learnt by end of Year 3</td> </tr> </table>	Stage 1 Unit 1 Doubles	Stage 2 Unit 1 2 Times Table	Stage 2 Unit 2 Square Times Table	Stage 2 Unit 3 5 Times Table	Stage 2 Unit 4 Consolidation	5 weeks	5 weeks (8 facts)	5 weeks (7 new facts)	5 weeks (6 new facts)	3-5 weeks 21 out of 36 facts learnt by end of Year 3	
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# Year 4 overview

Autumn			Spring						Summer			
Stage 3 Unit 1 Recap	Stage 3 Unit 2 3 Times Table	Stage 3 Unit 3 4 Times Table	Stage 3 Unit 4 6 Times Table	Stage 3 Unit 5 7 Times Table	Stage 3 Unit 6 8 Times Table	Stage 3 Unit 7 9 Times Table	Stage 4 Unit 1 More squares	Stage 4 Unit 2 10&11 TT	Stage 4 Unit 3 12 Times Table	Stage 4 Unit 4 MTC Prep	MTC	Stage 5 Consolidation
3 weeks	5 weeks (5 new facts)	5 weeks (4 new facts)	3 weeks (3 new facts)	3 weeks (2 new facts)	2 weeks (1 new fact)	2 weeks (0 new facts)	1 wk	1 wk	4 weeks	3 weeks	1 wk	3-5 weeks
30 out of 36 facts learnt by end of Autumn Term			All 36 facts learnt by mid Spring 2						(Remaining facts needed for MTC learnt)			



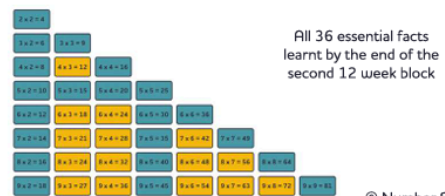
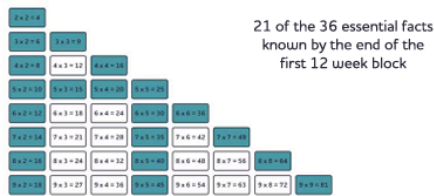
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## 'Getting going plan' for Year 5 and Year 6 in 2023

### Getting Going Plan – The 36 Essential Facts in 24 weeks

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12		
Weeks 1 - 12	Stage 1 Unit 1 Doubles		Stage 2 Unit 1 2 Times Table Booklet sessions 1 – 16				Stage 2 Unit 2 Square Times Table Booklet sessions 1 – 16			Stage 2 Unit 2 5 Times Table Booklet sessions 1 – 16			Spare days	
	8 days		16 days 8 facts				16 days 7 new facts			16 days 6 facts			21 out of 36 essential facts learnt	
Weeks 13 - 24	Stage 3 Unit 2 3 Times Table Booklet sessions 1 – 16				Stage 3 Unit 3 4 Times Table Booklet sessions 1 – 16				Stage 3 Unit 4 6 Times Table Booklet sessions 1 – 12			Stage 3 Extra booklet 7, 8 and 9 Times Table Booklet sessions 1 – 10		Spare days
	16 days 5 new facts				16 days 4 new facts				12 days 3 new facts			12 days 3 new facts		All 36 essential facts learnt
Weeks 25 on→	Embed fluent and develop conceptual understanding using Stage 5 Book 1, Consolidation to 9 x 9													

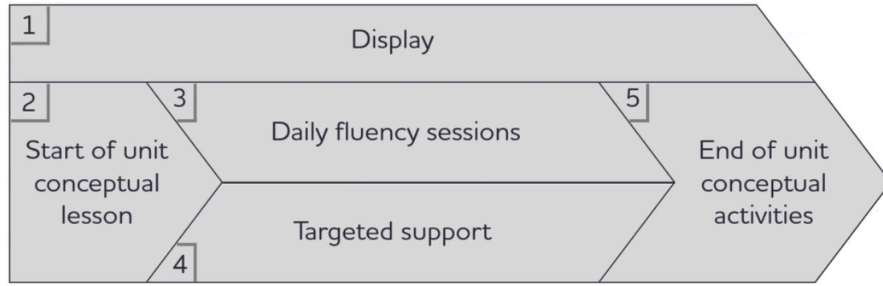


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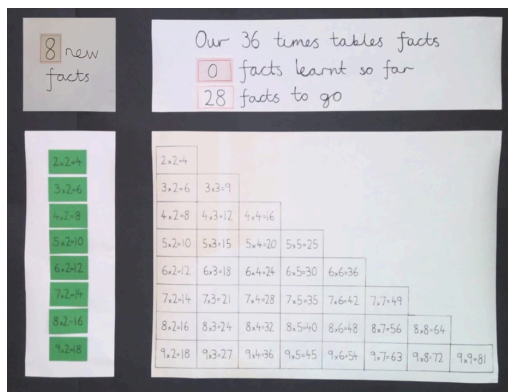
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# How are times tables taught at our academy? Principles and teaching approach.

All teaching units in our Times Tables Fluency Programme follow the same 5 step teaching approach:



1. A consistent classroom display through the programme helps children see where they are on the journey to fluency, and provides them with a place to find facts that they do not yet know.



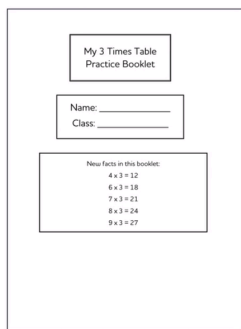
2. Children need to be **taught** to build an understanding of multiplicative structures and relationships as well as learning times tables facts. The Times Tables Fluency programme teaches this conceptual understanding through both the start of unit conceptual lessons, where children look at patterns and structures within multiples of that number, and through the end of unit conceptual activities (see Step 5). **This teaching is done through the use of counting sticks, chanting and animations.**

Lesson animations

Lesson plan

Independent work

3. The 10 minute daily fluency session **is at the heart of the teaching approach.** It's where the repeated retrieval and rehearsal of the facts, which leads to fluency in recall, takes place. There is specific pedagogy to each of the four parts of that daily session. See Appendix '**Structure of a fluency session.**'



1) Filling in the booklets  
2 minutes

Repeated retrieval of already-known facts

2) Chanting and marking  
3 minutes

Repeated oral rehearsal of both already-known and not-yet-known facts

3) Recording scores  
2 minutes

Identifying where you need to intervene with targeted support

4) Celebrating and identifying facts to learn  
3 minutes

Developing motivation  
Targeted support

Sessions 1 – 4

First column:  $3 \times 2$ ,  $3 \times 3$ ,  $4 \times 3$ ,  $5 \times 3$ ,  $6 \times 3$   
Second column: All facts learnt so far

Sessions 5 – 8

First column:  $7 \times 3$ ,  $8 \times 3$ ,  $9 \times 3$   
Second column: All facts learnt so far

Sessions 9 – 12

First column: All 3 times table facts  
Second column: All facts learnt so far

Sessions 13 – 22

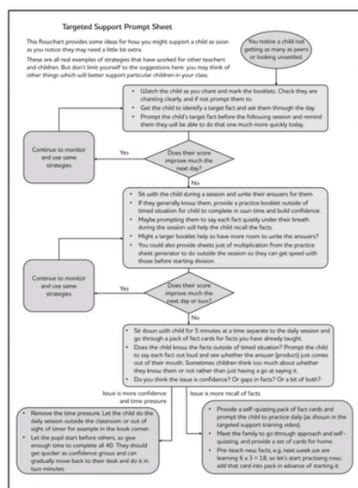
All facts learnt so far

The key points here are that we teach our times tables as a memorised phrase by repeating sound patterns out loud. We don't try to derive. If children don't know them they copy them down then learn later. We teach each fact one way round only, then get confident at switching factors. We don't think! (This is about the only time in maths when thinking is unhelpful!) When trying to recall a fact, we teach children to say the WHOLE number sentence out loud and see if the answer trips off their tongue. We also teach one new fact at a time and we don't teach the whole times table at once. **Children's daily fluency session scores are recorded using the given format. This will also help the teacher identify who needs targeted support. (Step 4 below)**

Name	First half of 5 tt				Second half of 5 tt				All 5 tt facts				All facts learnt so far									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22

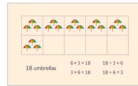
#### 4. Targeted approach.

The highly structured nature of our programme means the vast majority of children keep pace with peers. Where targeted support is needed it happens within the main programme, rather than as a separate intervention. Our guidance for this step shows how to bring your knowledge of, and relationships with, the children to the fore, to support all children to become fluent.

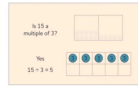


5. The end of unit conceptual activities teach children to apply the times tables facts they are fluent in to multiplicative structures and properties.

End of unit animations



Grouping



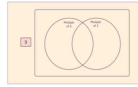
Is this a multiple of 3?



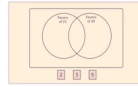
Cumulative grouping



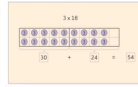
Factor families



Multiple Venn



Factor Venn



Times by a teen



Hundred square