Acquiring Speed recall in Times Tables at Hanwell Fields

At Hanwell we recognise that if children have a deep knowledge of some number facts, this will reduce the load on their working memory. Daily practice can lead to children recognising each times-table as a unit which makes the basic skill of retrieving a tables fact more automatic – we call this "over-learning." This does not always lead to "Number sense" and through discussion and making links between known facts e.g. 2 x 6, we can support our children to work out more demanding sums like 20 x 6. "The answer is only the start," is a phrase used to help children explain HOW they have calculated. Time spent at this stage can often help speed up recall.

We strive to give our children the best learning experiences and teach times tables in a variety of ways using songs, chants, resources (e.g. socks to count in 2s, hands to count in 5s) and moany more innovative ways.

What Facts are my children learning?

The National Curriculum expectation for Primary Schools across the UK is that, by the end of Year 4, pupils are capable of recalling all 12 times tables up to 12x2.

Year 1	
Autumn 1 & 2	Count in 2's up to 24, linking with even numbers and supporting doubles. Count in multiples of 10 in order up to 120.
Spring 1 & 2	Focus on counting in multiples of 5 up to 60, linking with knowledge of counting in 10s. Continue to develop fluency of counting in 2's and 10's.
Summer 1	Count in multiples of 10, 2 and 5 in order with growing fluency.
Summer 2	Count in multiples of 10, 2 and 5 in order fluently.

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Year 2

Autumn 1	Consolidate counting in steps of 2, 5 and 10 in order from 0 up to 12x.
Autumn 2	Count in steps of 2 and 5 from 0 up to 12x fluently. Recall multiples of 10 up to 12x10 in any order, including missing numbers and related division facts with growing fluency.
Spring 1	Recall multiples of 2 up to 12x2 in any order, including missing numbers and related division facts. Recall multiples of 10 up to 12x10 fluently.
Spring 2	Recall multiples of 5 up to 12x5 in any order, including missing numbers and related division facts. Recall multiples of 2 up to 12x2 in any order, including missing numbers and related division facts with growing fluency.
Summer 1	Count in multiples of 3 to 12x3 in order from 0. Recall multiples of 2 up to 12x2 in any order, including missing numbers and related division facts fluently. Recall multiples of 5 up to 12x5 in any order, including missing numbers and related division facts with growing fluency.
Summer 2	Count in multiples of 3 to 12x3 in order from 0 with growing fluency. Recall multiples of 5 up to 12x5 in any order, including missing numbers and related division facts fluently.

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Year 3

Autumn 1	Count in multiples of 3 to 12x3 in order from 0 fluently.
Autumn 2	Recall multiples of 3 up to 12x3 in any order, including missing numbers and related division facts with growing fluency. Count in multiples of 4 to 12x4 in order from 0 with growing fluency. Introduce (relating to x4) and begin to count in multiples of 8 from 0 to 12x8.
Spring 1	Recall multiples of 3 up to 12x3 in any order, including missing numbers and related division facts fluently. Count in multiples of 4 to 12x4 in order from 0 with fluently. Count in multiples of 8 to 12x8 in order from 0 with growing fluency.
Spring 2	Recall multiples of 4 up to 12x4 in any order, including missing numbers and related division facts with growing fluency. Count in multiples of 8 to 12x8 in order from 0 fluently.
Summer 1	Recall multiples of 4 up to 12x4 in any order, including missing numbers and related division facts fluently. Recall multiples of 8 up to 12x8 in any order, including missing numbers and related division facts with growing fluency.
Summer 2	Recall multiples of 8 up to 12x8 in any order, including missing numbers and related division facts fluently.

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Year 4

Autumn 1	Recall multiples of 3,4 and 8 up to 12x in any order, including missing numbers and related division facts fluently. Fluently count in 6's in order up to 12x6, using multiples of 3 to support.
Autumn 2	Recall multiples of 6 in any order, including missing numbers and related division facts with growing fluency. Fluently count in 7's in order up to 12x7.
Spring 1	Recall multiples of 6 in any order, including missing numbers and related division facts fluently. Recall multiples of 7 in any order, including missing numbers and related division facts with growing fluency.
Spring 2	Recall multiples of 7 in any order, including missing numbers and related division facts fluently. Fluently count in 9's in order up to 12x9. Fluently count in 11's in order up to 12x11.
Summer 1	Recall multiples of 9 in any order, including missing numbers and related division facts with growing fluency (using 10x and adjusting by 1 group to find 9x as a strategy) Recall multiples of 11 in any order, including missing numbers and related division facts fluently. Fluently count in 12's in order up to 12x12.
Summer 2	Recall multiples of 9 in any order, including missing numbers and related division facts fluently. Recall multiples of 12 in any order, including missing numbers and related division facts with growing fluency (using 10x and adjusting by adding 2 more groups).

Year 5

The National Curriculum expectation is that by the end of Year 4, children are able to recall all 12 tables up to 12x12.
To secure this, we recommended that the first term of Year 5 be used to consolidate by continuing your practice.
If you find that your children are working below the structure outlined in this document, we recommend tracking back to where your children are.

Autumn Term	Recall multiples of 12 in any order, including missing numbers and related division facts fluently. Recall multiples of all times tables up to 12x12 in any order, including missing numbers and related division facts with growing fluency.

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How Can I best support my child?

In 2011, Ofsted stated that parental engagement can raise achievement in schools and that children have higher attainment levels and achieve more academically when parents are involved with their education.

Remain positive – children acquire knowledge in many different ways: rewarding hard work puts them in control of their learning and can help with attitudes to all learning.

Let them make mistakes - it's part of learning and challenging yourself: If they get a tables fact wrong, ask them, HOW they worked it out – this often helps to show what methods they are using.

Link it to all you do: How could you incorporate times tables into your every-day life?: shopping, cooking, playing footie, money and food. Remember "Morris" Hanwell's maths detective – he sees the maths in all we do in school!

Memory games: developing our memories helps us to make links and connections between what we know and what we have yet to master. "I went to the shops and bought….", telephone numbers moving on to tables facts.

Maths Games: whether actual board games or online interactive versions, games like dominoes, snakes and ladders and snap using packs of cards.

Online Maths Resources: This is by no means an exhaustive list and new games are created all the time so it's probably a good idea to vary the game you play to keep their interest. If the game has a timed element – keep a tally and play along.

https://www.timestables.co.uk

https://www.topmarks.co.uk/maths-games/7-11-years/times-tables

http://www.dr-mikes-math-games-for-kids.com/times-tables-games.html

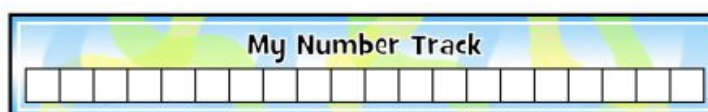http://www.bbc.co.uk/skillswise/game/ma13tabl-game-tables-grid-find

How do they learn times tables in school?

We use a range of strategies in school to make connections between known facts and this they have yet to master.

Number tracks – these might be completed with tables facts, have some missing, start at x 12 and

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1	2	3		5	6	7		9	10
11		13	14	15		17	18	19	
21	22	23		25	26	27		29	30
31		33	34	35		37	38	39	
41	42	43		45	46	47		49	50
51		53	54	55		57	58	59	
61	62	63		65	66	67		69	70
71		73	74	75		77	78	79	
81	82	83		85	86	87		89	90
91		93	94	95		97	98	99	

go

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

backwards to encourage a deep understanding.

100 squares – with any multiple highlighted (or blank for children to complete). These pictoral representations allow children to see patterns in associated tables facts. They are a powerful resource to encourage deep thinking. Why are there more multiples of 10 in the 4 times than in the 8s for example? This reasoning can highlight patterns yet to be noticed.

Arrays to model: using resources to actually make their tables facts can act as a stepping stone to children who have not yet committed that fact to their working memory -it demonstrates too that 4x3 can also be 3x4 (the commutative law) this cuts down the facts we need to remember!
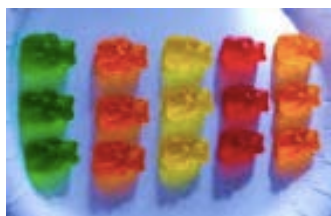
Chanting and singing: this is often the most memorable way for many children to learn facts and it is also great fun and can be quite competitive! There are so many available.
https://www.youtube.com/watch?v=9XzfQUXqiYY

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<mark>*Click on this link to watch some videos of how we make time tables fun in school!*</mark>

Counting Stick: See the weblinks on our school website to see the many ways we can use this in class.

Numberlines: to support counting on in a given number – sometimes with resources to support too. Notice how this reinforces the equal steps.
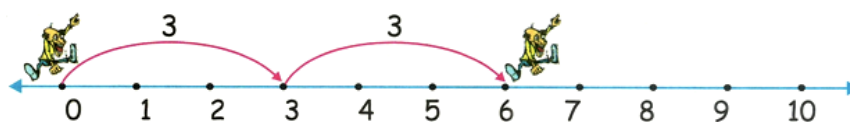
Testing: At Hanwell we recognise the need to measure progress and that most children love the challenge of improving their score weekly – see how our test encourage reflection to ensure we are always making links between what we know and facts we are not yet secure with. Notice how sometimes the answers are given, one of the facts is missing or just the pictorial representation is shown. These are all available on our website – upto x12.

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Timestable Challenge x 3

Here is a multiplication grid.
Fill in the missing numbers.

x	4	3	6
		9	
	8		12
5			

3 x [ ] = 9

3 = [ ] x 3

[ ] x 3 = 0

3 x [ ] = 27

15 = [ ] x 3

[ ] x 3 = 24

3 x [ ] = 36

3 x [ ] = 30

12 = [ ] x 3

3 x [ ] = 6

[ ] x 3 = 18

[ ] = 9 x 3

[ ] x 3 = 33

[ ] x 7 = 21

[ ] x 3 = 21

15 = [ ] x [ ]

6 = [ ] x 3

3 x [ ] = 8 x [ ]

Here is a number pyramid.
The number in a box is the
product of the two numbers
below it. **Write the missing
numbers:**

```
      [ ]
    [ 6 ]
  [ 2 ]  [ 4 ]
```

```
      [ ]
   [ 24 ][ 3 ]
  [ ]  [ 3 ]
```
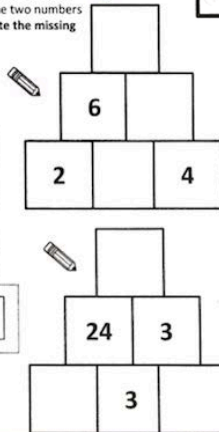
Next week I need to focus on...