

“Maths Wrap doubles the speed of progress learning times tables.”

**With Thanks:**

ZooBookKoo would like to take this opportunity to thank in particular Cherri Moseley, 3M teacher at Bignold Primary School, for running and reporting this trial. We would also like to thank all the Year 3 children at the school and Mrs Norman, the control class teacher. Stephen Wattleworth, MD of ZooBookKoo, commented on the trial, ‘We were sure Maths Wrap was effective, but we wanted concrete evidence from an independent trial proving the value of Maths Wrap and we found that Maths Wrap more than doubles the speed of progress when learning times tables.’

**Trial Summary:**

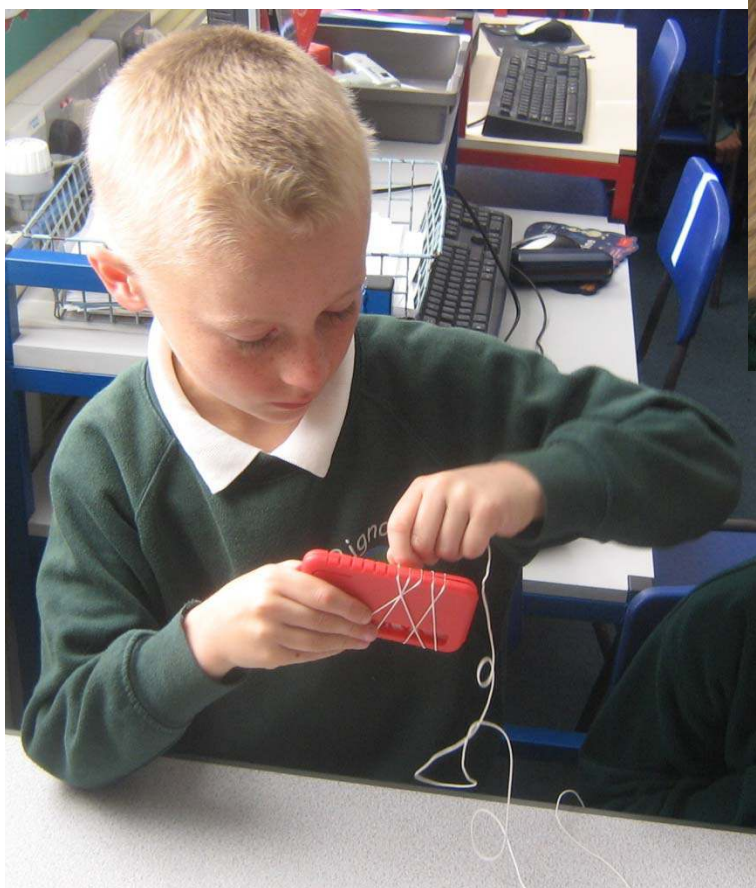
In a recent trial with a Year 3 class, the pupils worked in pairs with Maths Wraps, 3-5 times a week during the maths lesson starter for a 4 week period. Another Year 3 class acted as a control group and did not use Maths Wraps. Both classes undertook the same two multiplication tests before and after the trial. The improvement in those using Maths Wraps (+37% / +27%) was more than double that of the control group (+16% / +7%). Please see below for full details.

**Full Trial Report:**

Please see below

Full Trial Report:

**Year 3 Maths Wrap Trial, April/ May 2009**  
**Bignold Primary School & Nursery,**  
**Norwich**



Maths Wrap was designed to help children learn their times tables. Cherri Moseley was asked by the Mathematical Association to act as a consultant to Simon Deacon, the designer. When the product was launched, Cherri was invited to trial the Maths Wrap.

A class set of 15 Maths Wraps was provided for 3M with 3N acting as the control group. The intention was that the children would work in pairs, one child 'wrapping' while their partner timed them. With too few working timers in school, the children still worked in pairs but with everyone using the IWB timer together.

Both classes undertook the same pre-trial multiplication tests. The Maths Wrap was introduced to 3M after the pre-trial tests, while 3N continued with normal classroom activities. Multiplication appears as an objective in four of the five mathematics blocks (Block A Units 2 and 3, Blocks B and E Units 1 to 3 - Derive and recall multiplication facts for the 2, 3, 4, 5, 6 and 10 times tables and the corresponding division facts; Block D Units 2 and 3 - Use practical and informal written methods to multiply and divide two digit numbers e.g.  $13 \times 3$ ,  $50 \div 4$ ) so was likely to be included within the daily mathematics lesson. In 3M, multiplication facts were practiced 3 to 5 times a week using the Maths Wrap during the lesson starter. Children could also choose to use a Maths Wrap

when they had completed an activity or had free time. After 4 weeks, the same multiplication tests were retaken with the following results:

	Average pre-trial score Grid out of 70	Average post-trial score Grid out of 70	Average pre-trial score Missing numbers out of 40	Average post-trial score Missing numbers out of 40
3M (test class)	38 = 54%	52 = 74%	22 = 55%	28 = 70%
3N (control class)	30 = 43%	35 = 50%	18 = 45%	19 = 48%

There is clearly a much greater increase in test scores in 3M, from 54% to 74% and from 55% to 70%. In 3N, smaller gains were evident as scores improved from 43% to 50% and 45% to 48%. Looking more closely at the results, several children in 3M doubled their score, halved their time or gained in confidence as demonstrated by far fewer calculations not attempted. In 3N, fewer children doubled their score and there was a smaller reduction in the number of calculations not attempted. Finishing times were not recorded.

The percentage increase in 3M is much larger, 20% and 15% instead of 7% and 3% in 3N. Although 3M is recognised as the more able class and were focusing more on times table facts than 3N, there is clearly a large improvement in achievement in 3M. The children found the Maths Wrap fun and motivating. This was a very useful way to begin to learn times table facts and one I will repeat with future classes.

C Moseley 27.05.09

Test results below

<b>Class 3M, Maths Wraps trial</b> Pre/post trial test 20 minute time limit	27.04.09 Missing numbers out of 40	comments	18.05.09 Missing numbers out of 40	comments
Pupil 1	38	16 mins	37	6 mins
Pupil 2	10	27 not attempted	14	21 not attempted
Pupil 3	12	26 not attempted	1	Attempted all but mostly added (SEN)
Pupil 4	15	20 not attempted	32	17mins 50
Pupil 5	38	15 mins	38	12 mins
Pupil 6	23	13 not attempted	37	All attempted
Pupil 7	25	19 mins	32	17mins 20 secs
Pupil 8	20	17 not attempted	30	6 not attempted Some adding
Pupil 9	16	17 not attempted	31	
Pupil 10	10	29 not attempted	21	5 not attempted
Pupil 11	18	21 not attempted	31	9 not attempted
Pupil 12	18	19 mins	19	11 not attempted
Pupil 13	25	13 not attempted	24	13mins 9 secs Some adding
Pupil 14	14	25 not attempted	23	15 not attempted
Pupil 15	24	11 not attempted	30	2 not attempted
Pupil 16	38	18 mins	37	14 mins
Pupil 17	23	7 not attempted	32	18mins 23 secs
Pupil 18	17	21 not attempted	29	10 not attempted
Pupil 19	24	10 not attempted	28	All attempted
Pupil 20	18	14 not attempted	35	12mins 48 secs
Pupil 21	absent		24	18 mins 23 sec
Pupil 22	17	17 not attempted	20	4 not attempted
Pupil 23	38	10 mins	38	5 mins
Pupil 24	16	18 not attempted	21	13 not attempted
Average score	22	<b>55%</b>	28	<b>70%</b>

<b>Class 3M, Maths Wraps trial</b> Pre/post trial test 20 minute time limit	28.04.09 Grid out of 70	comments	19.05.09 Grid out of 70	comments
Pupil 1	65	In 12 mins	68	5mins 32
Pupil 2	24	45 not attempted	46	21 not attempted
Pupil 3	9	47 not attempted	5	45 not attempted
Pupil 4	30	27 not attempted	48	11 not attempted
Pupil 5	65	In 17 mins	62	11mins 06
Pupil 6	54	In 19 mins	65	9mins 20 sec
Pupil 7	54	20 mins	69	11 mins 36
Pupil 8	49	In 18 mins	47	7mins 35
Pupil 9	34	26 not attempted	57	1 not attempted
Pupil 10	20	46 not attempted	51	9mins 18
Pupil 11	40	20 not attempted	69	15 mins 29
Pupil 12	18	29 not attempted	25	22 not attempted
Pupil 13	25	34 not attempted	51	15mins 08
Pupil 14	39	12 not attempted	49	19mins 21
Pupil 15	37	15 not attempted	38	31 not attempted
Pupil 16	61	19 mins	70	10mins 08
Pupil 17	46	19 not attempted	absent	
Pupil 18	25	40 not attempted	64	14mins 29
Pupil 19	24	10 not attempted	absent	
Pupil 20	66	In 20 mins	66	10mins 14
Pupil 21	41	In 17 mins	48	9mins 13 sec
Pupil 22	12	39 not attempted	47	16mins 44
Pupil 23	70	In 14 mins	70	5mins 22 sec
Pupil 24	14	52 not attempted	37	1 not attempted
Average score	38	<b>54%</b>	52	<b>74%</b>

<b>Class 3N, Maths Wraps control group</b> Pre/post trial test 20 minute time limit	28.04.09 Missing numbers out of 40	comments	19.05.09 Missing numbers out of 40	comments
Pupil 1	3	27 not attempted adding	5	34 not attempted adding
Pupil 2	22	16 not attempted	13	19 not attempted
Pupil 3	17	19 not attempted	26	12 not attempted
Pupil 4	31	9 not attempted	34	6 not attempted
Pupil 5	5	32 not attempted	7	21 not attempted
Pupil 6	19	18 not attempted	39	
Pupil 7	12	15 not attempted Some adding	13	10 not attempted Mostly adding
Pupil 8	8	21 not attempted	10	21 not attempted
Pupil 9	17	21 not attempted	26	13 not attempted
Pupil 10	20	13 not attempted Some adding	25	12 not attempted
Pupil 11	16	17 not attempted	14	16 not attempted Some adding
Pupil 12	13	22 not attempted adding	3	14 not attempted adding
Pupil 13	24	14 not attempted	29	10 not attempted
Pupil 14	26	12 not attempted	23	9 not attempted
Pupil 15	17	22 not attempted	20	19 not attempted
Pupil 16	12	27 not attempted	23	13 not attempted
Pupil 17	27	11 not attempted	25	14 not attempted
Pupil 18	20	17 not attempted	19	21 not attempted
Pupil 19	9	22 not attempted Some adding	8	18 not attempted Mostly adding
Pupil 20	3	27 not attempted adding	3	25 not attempted Using + -, not x
Pupil 21	34	4 not attempted	32	8 not attempted
Pupil 22	20	20 not attempted	21	16 not attempted
Pupil 23	21	14 not attempted	30	9 not attempted
Pupil 24	40		absent	
Average score	18	<b>45%</b>	19	<b>48%</b>

<b>Class 3N, Maths Wraps control group</b> Pre/post trial tests 20 minute time limit	28.04.09 Grid out of 70	comments	18.05.09 Grid out of 70	comments
Pupil 1	11	57 not attempted	26	42 not attempted
Pupil 2	23	32 not attempted some adding	31	23 not attempted
Pupil 3	2	62 not attempted	49	
Pupil 4	66		48	22 not attempted
Pupil 5	16	27 not attempted	8	54 not attempted
Pupil 6	57		57	4 not attempted
Pupil 7	12	53 not attempted	15	
Pupil 8	21	33 not attempted reversing teens digits	49	reversing teens digits
Pupil 9	absent		33	25 not attempted
Pupil 10	41	16 not attempted	37	28 not attempted
Pupil 11	18	46 not attempted	14	16 not attempted Some adding
Pupil 12	6	40 not attempted	30	22 not attempted
Pupil 13	51	19 not attempted	53	13 not attempted
Pupil 14	10		9	49 not attempted
Pupil 15	absent		27	39 not attempted
Pupil 16	19	47 not attempted	34	31 not attempted
Pupil 17	53	16 not attempted	53	16 not attempted
Pupil 18	28	37 not attempted	31	34 not attempted
Pupil 19	5	65 not attempted	26	37 not attempted
Pupil 20	2	40 not attempted	11	41 not attempted
Pupil 21	68		66	
Pupil 22	47	21 not attempted	48	20 not attempted
Pupil 23	44	21 not attempted	56	
Pupil 24	70		absent	
Average score	30	<b>43%</b>	35	<b>50%</b>