

Benton Hall Academy, Little Falls, NY May 12 and 13 Math & Movement Symposium

The students worked one-on-one with teachers for approximately 90 minutes over two days. On the pre-test, many of the 2nd grade students did not know any of the multiplication by 3's problems. On the post-tests, 56% of the students had nearly all 32 multiplication by 3's problems answered correctly and ALL the students demonstrated a large increase in problems solved. Both the pre- and post-test were completed from memory without the use of any floor mats or banners.

Please note that the classroom teacher provided the approximate level of each student. It is interesting to note that the Math & Movement process worked well for all students regardless of the level of student.

Student	Pre-test	Post-test	Level (1-Below Average, 2-Average, 3-Above Average)
1	0	15	1
2	7	32	1
3	0	32	1
4	10	31	1
5	0	12	1
6	0	32	1
7	2	11	2
8	0	17	2
9	6	20	2
10	0	32	2
11	12	29	3
12	0	31	3
13	3	32	3
14	1	32	3
15	32	32	3
16	6	27	3

The teachers observed that Math and Movement allowed the students to increase their focus and determination in completing the math problems. Many teachers commented about their student's transformation from indifference to enthusiasm towards math practice. The noticed an increase in student self-confidence. The teachers commented that the students learned how to use the floor mats as a tool to consistently determine the correct answer. The students also found the activities

fun and enjoyable, therefore, they were willing to continue to solve the math problems. This offered students abundant practice at a level of comfortable success which catapults student learning as seen in above chart of data.

One student that was identified as a struggling second grade student, became absorbed in solving the multiplication problems. He continued to work independently with great focus and determination for the allotted time period, without support from his teacher. According to his teacher, this is a student who requests regular movement breaks. The level of focus displayed while engaging in Math & Movement during the Symposium has rarely been exhibited in the classroom.

Another student shared with the group that she did not like math. It only took one session with Math and Movement for her to change her mind about math. She had a very large increase in the number of problems solved over the two-day period.

Math and Movement Symposium

November 5 and 6, 2015

Data from JD George Elementary School, Verona, NY

3rd grade students worked with teachers for four sessions over a two-day period. There was a 56% average increase in the student's scores! The data shows the number of problems answered correctly on the pre- and posts-tests. The pre-and post-tests were identical and contained 32 multiplication problems focusing on ONLY one multiplication fact such as $4 \times 3 =$ or $7 \times 3 =$. On both the pre-and post-test, the students had one minute to solve as many problems as they could.

Student	Pre	Post	Percentage Increase	Multiplication Fact
1	21	29	38.1	3
2	16	29	81.25	3
3	8	24	200	3
4	12	15	25	4
5	15	23	53.33	3
6	16	30	87.5	8
7	11	21	90.91	3
8	10	12	20	3
9	17	22	29.41	3
10	11	15	36.36	3
11	11	20	81.82	3
12	10	10	0	4
13	21	24	14.29	4
14	24	32	33.33	3
15	8	12	50	4

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Symposium DATA Heuvelton, NY

The students worked one-on-one with teachers for approximately 80 minutes over a two day period. On the pre-test, many of the 2nd grade students did not know any of the multiplication by 3's problems. ALL the students demonstrated a large increase in problems solved. Both the pre- and post-test were completed from memory without the use of any floor mats or banners.

Please note that the classroom teacher provided the approximate level of each student.

Student	Pre-test (1 Min.)	Pre-test (3 Min.)	Post-test (1 Min.)	Post-test (3 Min.)	Percentage Increase (1 Min.)	Percentage Increase (3 Min.)	Multiple
1	1		22		2100		3
2	0	0	16	40	-	-	6
3	0	0	11		-		3
4	0	3	16		-		3
5	3	12	11	16	266.67	33.33	3
6	2	11	12	32	500	190.91	3
7	1	7	7	32	600	357.14	3
8	5	6	19	21	280	250	3
9	0	6	10	32	-	433.33	3
10	0		9		-		3
11	0		6		-		3
12	4	15	16		300		3
13	0	3	12	32	-	966.67	3
14	0	0	9	12	-	-	3
15	2	4	16	32	700	700	3
16	0	0	13	32	-	-	3

The teachers observed that Math and Movement allowed the students to increase their focus and determination in completing the math problems. Many teachers commented about their student's transformation from indifference to enthusiasm towards math practice. The noticed an increase in student self-confidence. The teachers commented that the students learned how to use the floor mats as a tool to consistently determine the correct answer. The students also found the activities fun and enjoyable, therefore, they were willing to continue to solve the math problems. This offered students abundant practice at a level of comfortable success which catapults student learning as seen in above chart of data.

The level of focus displayed while engaging in Math & Movement during the Symposium has rarely been exhibited in the classroom.

One student was on school suspension because she was so disruptive in class. She attended the Symposium and worked consistently on the problems. She was not disruptive when engaged in Math & Movement.

Linden Elementary School December 7 and 8, 2015 Math & Movement Symposium

Oak Ridge, Tennessee

The following data represents the pre- and post-tests and the percentage increase. The intervention was the three sessions of teachers working with the students! The students had an average 90% increase in their multiplication facts on the post-tests!

Student	Pre-Test	Post-Test	% Increase	Multiple
1	17	30	76.47	7
2	3	4	33.33	4
3	15	22	46.67	3
4	18	26	44.44	7
5	10	22	120	4
6	16	26	62.5	6
7	5	23	360	3
8	16	30	87.5	3
9	7	14	100	3
10	12	20	66.67	4
11	10	23	130	3
12	10	8	-20	3 unknown why there was a decrease.
13	9	15	66.67	4
14	15	20	33.33	3
15	9	23	155.56	4
16	16	24	50	3
17	8	18	125	12
18	9	27	200	3
19	16	11	-31.25	3 **student tried harder problems on the post-test. Student was only willing to solve easy problems such as 3x0 or 3x1 on the pre-test. Teacher shared that although the numbers decreased on the post-test, the student had a significant increase in confidence and was willing to try to do all the problems!
		Average Percentage Increase	89.84	