

My impression and opinions of the Montessori methods of teaching mathematics and whether it works for my own children relates directly to my experience with teaching math to my daughter.

I have tried different methods previously for my daughter to develop her math skills. Initially, I left it to the school to teach her math mainly because I do not know how to present her with mathematical concepts in a way that I know will be very effective. And since I've learned my math in school, I thought that school should be enough. During her preschool years, she did not learn a lot of mathematical concepts – just simple addition and subtraction (one digit only). During her first two years in primary school, she did very well in her math class and always is at the top of her class. So I was quite satisfied with her development in this area.

However, having a strong mathematical foundation myself, I started to notice that her math skills are more in the rote calculation area only. Her problem-solving skill is not quite as developed. So I started to scout around for extra math lessons that she can take to develop in this area as well. My brother recommended Kumon math and without really understanding the details and implications of the program, I enrolled my then 7 year old daughter for Kumon. After having her go through it for about half a year, I let her stop since I found out it only made matters worse for her. Her problem solving skills did not get any better. To top that, she did not like to do the exercises at all and would resist doing them to the extent that she can. So I decided to tutor her on my own using Singapore math curriculum and lots of problem solving exercises. But I felt all along that there must be a better system out there than this, especially something that will trigger and sustain a child's interest in the subject. I kept looking for a math curriculum that will also make it come alive for children, going beyond just the books, by making it more than just one of those boring required subjects they need to learn.

Having seen and learned the math program of Montessori, I believe that this is finally the right curriculum for children, at least based on the pre-school level math I've seen. The Montessori materials for math not only are able to help the children grasp theories and concepts at a very practical and tangible level but, I believe, should also be able to sustain their interest and let them have fun with it. Everything from the use of the rods, the spindles, the beads, the different boards and especially the fraction skittles are just quite unique and takes away the tediousness of learning math.

From a purely curriculum standpoint, I can very well say that the Montessori program is advanced in the sense that it covers all the way to multiplication, division and even basic

fractions at a pre-school level. It is also quite complete in that it encompasses, for example, even the concept of zero and the recognition of numerical symbols as well as concepts all the way to the 10,000 level.

Homework for Montessori Directress/Director Training -- Mathematics

I see a lot of advantages from the use of Montessori materials. Aside from the way it makes math tangible and interesting which I've already mentioned previously, the materials can be used for different levels of math and/or to reinforce basic concepts even as new concepts are being learned. For example, for a younger child, the number rods can be used simply to teach counting/numeration. For an older child who has mastered counting, the same rods can be used to teach simple addition and subtraction. The beads can be used for multiple purposes – counting as well as teaching all the different mathematical operations (eg, addition, subtraction, multiplication, division). Moreover, for practical purposes, one does not really have to spend so much money for these materials as most can be home-made.

More importantly, I learned how to use other home-made materials to continue to make the subject interesting and fun for children by providing more variety without costing so much – including the use of combination of self cut-out materials to reinforce concepts of numbers and counting in the shape of leaves and a tree, or fruits and a tree, or fishes and boat, different cut sizes of apples to teach fraction concepts, etc.

I am quite excited to apply all the methods in Mathematics for my son. I wished I had known about this program when my daughter was still young too. I think that with its hands-on approach and the use of tangible objects to teach mathematical concepts, children can more easily understand and apply mathematical theories. This will lead to a very good, solid foundation of basic mathematical concepts. I am also quite impressed with the curriculum that included multiplication, division and even fractions for the pre-school age-group. I look forward to my pre-school son to understand all these mathematical concepts before he even reaches primary one level.

Truly impressive curriculum. If only because of this too, I am quite interested to know what the higher age group math curriculum looks like and how they are presented the Montessori way – as I'm almost sure it will also be helpful for my daughter.