Maths Activity Manual

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Introduction to Mathematics

Math is all around the young child from day one. How old are you? In one hour you will go to school. You were born on the 2nd.

Number itself cannot be defined and understand of number grows from experience with real objects but eventually they become abstract ideas. It is one of the most abstract concepts that the human mind has encountered. No physical aspects of objects can ever suggest the idea of number. The ability to count, to compute, and to use numerical relationships are among the most significant among human achievements. The concept of number is not the contribution of a single individual but is the product of a gradual, social evolution. The number system which has been created over thousands of years is an abstract invention. It began with the realization of one and then more than one. It is marvellous to see the readiness of the child's understanding of this same concept.

Arithmetic deals with shape, space, numbers, and their relationships and attributes by the use of numbers and symbols. It is a study of the science of pattern and includes patterns of all kinds, such as numerical patterns, abstract patterns, patterns of shape and motion. In the Montessori classroom, five families with math are presented to the child: arithmetic, geometry, statistics and calculus. More precisely, the concepts covered in the Primary class are numeration, the decimal system, computation, the arithmetic tables, whole numbers, fractions, and positive numbers. We offer arithmetic to the child in the final two years of the first place of developments from age four to age five and six.

Arithmetic is the science of computing using positive real numbers. It is specifically the process of addition, subtraction, multiplication and division. The materials of the Primary Montessori classroom also present sensorial experiences m geometry and algebra.

Little children are naturally attracted to the science of number. Mathematics, like language, is the product of the human intellect.

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Numbers Through Tens

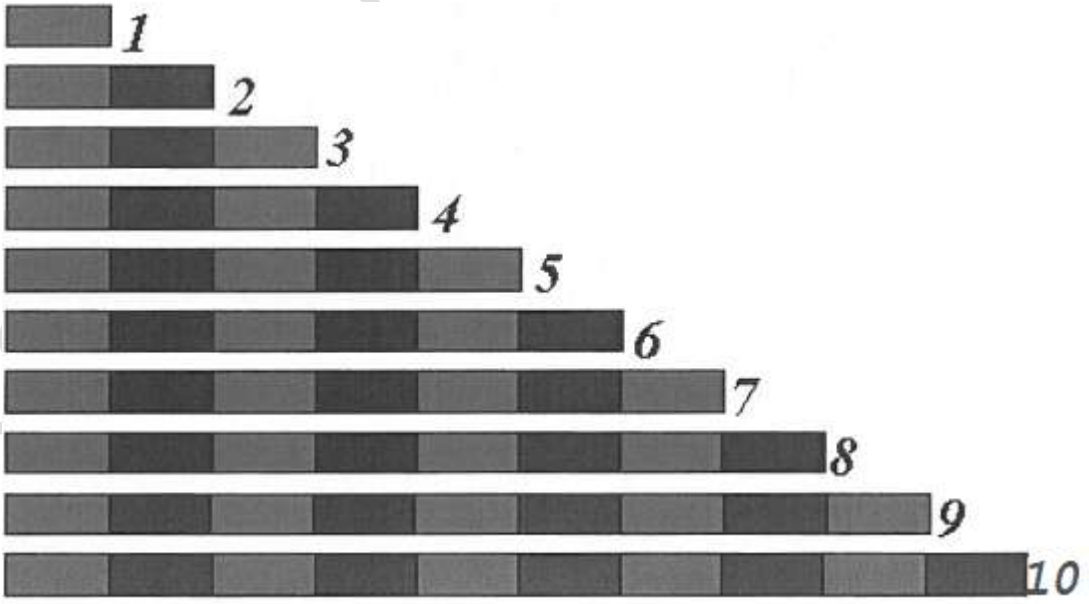
Number Rods

Materials

- Ten rods identical with the Red Rods in length, but divided into red and blue section. The shortest rod is red. The second is twice the size of the first; one half is painted red and the other half is blue. The third rod is three times the size of the first and is divided into three sections; the first painted red, the second is blue, and the third red. All the other rods are divided in a similar fashion, alternating red and blue, the first section always being red. The number of sections represent the numbers of the rod.
- A floor mat

Notes

- Carry and assemble the rod as you would with the Red Rods.
- Do the Three Period Lesson to teach the names, be sure to count the red rods each time.
- Continue through the activities as the child is ready. You must be sure the child understands the quantities before moving on from the naming.
- Some children will be able to do this work in one sitting.
- Be sure to review previous names before moving on to new ones.
- Continue through the series on consecutive days.



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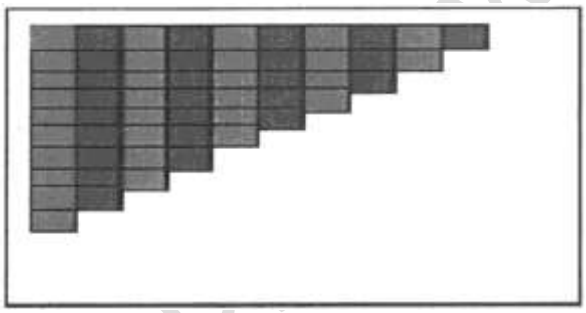
Presentation

Stage A: Naming and Counting

1. Invite the child to come and work with you. Bring the child over to the Red Rods and discuss with the child how he knows how to use them.
2. Tell the child that we have other set of rods that are almost like the Red Rods.
3. Show the child the Number Rods and tell the child that they are almost like the Red Rods except for they are red and blue.
4. Have the child bring over two mats. Unroll one horizontally and the other vertically.
5. Have the child bring over each number rod and place them randomly onto the vertical mat.
6. Sit in front of the horizontal mat.
7. Ask the child to build the rods as he would with the Red Rods on the horizontal mat.



8. Point out that we will always start with the red section to the left.
9. Isolate the first three rods.
10. Point to rod 1, Say, **"This is one."** Count.
11. Point to the blue on rod 2, Say, **"This is two."** Then count.
12. Point to the red on rod 3, Say **"This is three."** Then count.
13. Repeat this a few times. (This is the 1st Period of the Three Period Lesson.)
14. Move the rods so they are on the same horizontal line. Do the 2nd Period of the Three Period Lessons.
15. Do the 3rd Period of the Three Period Lessons.
16. Ask the child to replace the three rods back with the others.
17. Take out rods 4, 5, and 6.
18. Count each section of rod 4
19. Repeat as you did with the first three rod.
20. Repeat for rod 7, 8, and 9.
21. Then repeat with rods 8, 9, and 10.
22. Depending on the child, this may be taught over a few days. **For complete course material Enrol Now @ www.aitta.in or Call 70143-22350**

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