

## First Friends Children's Center Preschool Parents:

Thank you for volunteering to help us with our Math Tub program! This is a pre-math program I developed a few years ago, which allows the children to freely explore a variety of manipulative materials while building their skills in mathematics.

The tubs contain colored discs, plastic bears, frogs, buttons, jewels, rocks, beads, geoboards, unifix cubes, fruits and many other types of sorting materials. There are also sorting bins, baskets, bowls, divided trays and graphing sheets to extend their use of the materials in the tubs.

I feel it is very beneficial for preschool children to have open-ended time for hands-on experience exploring these kinds of materials in a variety of ways, in preparation for kindergarten math work. Studies show that if young children experience materials in a concrete way, (with their hands,) they will be more likely to understand the abstract concepts and symbolism of mathematics later on. We will plan just under an hour, on Fridays, for the children to use the Math Tubs.

### Here's how it works:

The children choose a Math Tub from the table. (I don't limit which tubs they use, but I do encourage them to try one they haven't tried before.)

Math Tubs may be used by a child alone or with ONE friend.

The children take out One tub at a time.

Materials from one tub are not to be mixed with those of another tub.

During Math Tub time, the other toys and play equipment are closed.

Math Tubs may be done on the floor or on a table.

Children learn in very different ways, so some children work with the materials by picking pieces out of the tub one by one and others tend to dump out everything before deciding how they want to use them-both of these methods are fine.

Some children sit at the table with a few items right in front of them,

while others spread many sorting bins across the carpet-both of these are fine.

The children are expected to clean up the materials in their tub and the sorting bins before getting out another tub.

The children determine when they are finished exploring a tub.

Math Tub materials are not for throwing, hitting or putting into your mouth.

The children may take sorting trays or bins with them when they take their tub, and use these to count or sort into.

When Math Tub time is over, the children return all their materials to their tub and bring it back to the table, and should be ready for instructions about what activity is next.

There is no one “right way” to use the Math Tubs. As long as the children are on task, working with the tub materials and exploring them in a positive way, (not throwing them or taking them from another child), they are gaining new skills. Much of the time, it looks as if the children are simply “playing” with the materials in the tubs. However, after watching more closely, you will see that they are forming ideas, using language, watching others and learning from them, planning and thinking ahead about what they intend to do, and comparing colors, patterns, sizes and characteristics about the materials as they sort and group them. These are all important skills they will need.

Some of the skills they are using during Math Tub time include sorting, comparing, estimating, counting, numeral identification, patterning, graphing, matching, one-to-one correspondence, learning about similarities and differences, grouping, making sets, shape, size and color identification, language development and descriptive labeling, mathematical word concepts, (more, less, the same, longer, none, adding) sharing, cooperation, fine motor development, strengthening their hands and fingers, eye-hand coordination, making choices, self-esteem building, initiating and self-directing, and developing positive peer interaction.

Adults can make Math Tub time more meaningful for the children by:

.....helping them choose a tub-getting them involved  
.....helping them choose a place to work and a partner, if they want one  
.....suggesting some sorting bins, if they want some  
.....drawing them in or redirecting them if they seem to be wandering or don't have anyone to work with  
.....helping them stay focused on Math Tub time  
.....helping work out problems, sharing issues or other disagreements that come up  
.....reminding them about how the tubs are to be used  
.....suggesting ways they could use the materials-counting, sorting, graphing, etc.  
.....helping them verbalise about what they are doing  
.....giving them the words to describe what they are experiencing, ("I see you both have the same amount of bears." "Which line is the shortest?")  
.....asking them about what they are working with, how they are using the materials ("How many yellow ones do you have?" "Do you have more or do I have more?")  
.....suggesting new ways to use the materials, ("Have you tried putting all the striped frogs together into this basket and all the ones with spots into the other one?" or "We could put the buttons into piles with the biggest ones over here.")  
.....making a pattern for them to copy, or asking them to make a pattern for you to copy and then "reading" or naming the pattern they have created  
.....sitting down with them and doing what they are doing  
.....demonstrating or modeling to give them some ideas to get them started  
.....helping them clean up and put away the tubs after Math Tub time

Be sure to ask questions, if you are unsure about something. Thank you so much for giving your time to make this math experience possible for our children!

"Teacher Vicki"

