# Math Tubs

## Grade Level

Kindergarten

## Overview

Math Tubs are a time when the students gain an understanding of mathematical concepts through the use of manipulatives. They are hands on approach to make mathematical connections. While at math tubs, the students are able to link a concrete level to a more abstract level. During this time they can use manipulatives to represent concepts while working independently or in groups to solve problems. They gain a deeper understanding of mathematical concepts, why they are important and are able to learn how to apply them to everyday situations through practice of these mathematical concepts in math tubs. Although there are specific Framework tasks for each of the topics included, these are standards that need to be ongoing and can be done through the use of Math Tubs.

## Key Standards

### Geometry

**MKG3. Students will identify, create, extend, and transfer patterns from one representation to another using actions, objects, and geometric shapes.**

- a. Extend a given pattern, and recognize similarities (such as color, shape, texture, or number) in different patterns.

### Number Operations

**MKN2. Students will use representation to model addition.**

- a. Use counting strategies to find out how many items are in two sets when they are combined.
- b. Build number combinations up to 10.

**MKN1. Students will connect numerals to the quantities they represent.**

- a. Count a number of objects up to 30
- c. Write numerals through 20 to label sets.
- h. Identify coins by name and value
- i. Count out pennies to buy items less than 30 cents
- j. Make fair trades involving combinations of pennies and dimes

### Measurement

**MKM1. Students will group objects according to common properties such as longer/shorter, more/less, taller/shorter, and heavier/lighter.**

- a. Compare and order objects on the basis of length.
- b. Compare and order objects on the basis of height.
- c. Compare and order objects on the basis of weight.

### Data Analysis and Probability

**MKD1. Students will pose information questions, collect data, organize, and record results using objects, pictures, and picture graphs.**
### Process Standards
**MKP3. Students will communicate mathematically.**

### Possible Materials
- pattern blocks
- two sided beans
- any type of manipulatives to aid in the use of counting
- Unifix cubes
- snap cubes
- stickers
- money (real or fake) pennies and dimes
- any type of manipulatives to aid in the use of measurement (length, weight, height)
- graph for analyzing data

### Task
The children distribute the tubs or containers that are used for math tubs to the assigned area. Then the students will gather his or her Math Contract or Checklist to aid them in the direction of which math tub to chose for the day. The will choose a math tub based on the geometric shape on the contract or checklist and proceed to completing his or her task. The teacher’s role at that time is to aid in help or discussions about the task being completed. This discussion with the students is an excellent way to examine his or her understanding of the standards.

See Math Tub Checklist.

### Sample Questions
- How do you know that the cucumber is longer than the strawberry?
- I can see that you can count and show me $.10. Can you count $.13?
- I see that you can count 20 items. Can you count 30 items?
- How do you know that has more than?

### Sample Question Solutions
- I know that the cucumber is longer because I measured the cucumber and the strawberry with my Unifix cubes. The cucumber had more Unifix cubes than the strawberry.
- The student counts 1 dime and 3 pennies.
- The student counts 30 items touching each item has he or she counts.
- I know that there is more than because I counted more when I was graphing.

### Assessment Ideas
Assessment will be ongoing and takes place daily during the discussions had with the students. They can also be taken from observations, work samples or written samples from asking the students to write down what they learned from the day’s activities. The following can be assessed: patterns, adding using manipulatives, counting sets, writing
numerals, identifying money and their values, making fair trades between pennies and dimes, sorting by length, weight, and height, graphing, and interrupting data.