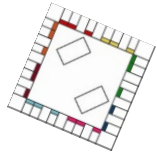


## Things to Do at Home

Provide opportunities for your child to talk and interact with the mathematics in their environment by ....



- playing board games and having your child count the spaces or dots on the dice.



- using 2- and 3-dimensional shapes to sort, create patterns, and build new shapes.



- working with puzzles to see spatial relationships and build perseverance.



- adding the dots on two dice to find the total.



- listening to stories that have connections to math.

## Kindergarten Mathematics



Long Beach Unified School District  
K-5 Math Curriculum Office  
Teacher Resource Center  
1299 E. 32<sup>nd</sup> St., Room D  
Signal Hill, CA 90755

### What's In?

Building conceptual understanding with manipulatives

Explaining why the answer is correct and how they arrived at the answer

Understanding there are multiple strategies to arrive at a solution and attempting to solve a problem in more than one way

Applying mathematical understandings to new situations in order to solve a problem

### What's Out?

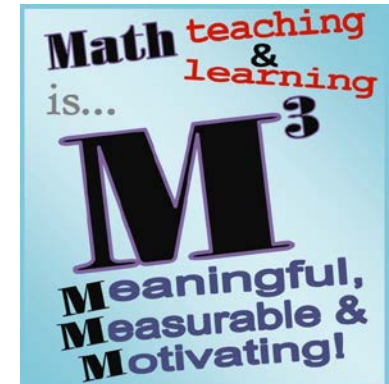
~~Learning the steps, algorithm, without conceptual understanding~~

~~Giving the "number" as the correct answer and moving on without explanations~~

~~Thinking there is only one method to finding a solution to a problem~~

~~Applying their understanding of mathematical concepts to only similar problems to find a solution~~

## Math Tools and Strategies Your Child Will Use in Kindergarten



*This brochure illustrates mathematical strategies students will be learning throughout the school year. Additional Parent Resources can be found at [www.lbschools.net](http://www.lbschools.net) under Mathematics and Family Resources.*

Pamela Seki  
Assistant Superintendent of Curriculum,  
Instruction and Professional  
Development

Lisa Dougan  
K - 5 Mathematics Curriculum Leader

## Kindergarten – Strategies

### Counting All –

Counting is a foundational mathematical skill. Students count a variety of different objects to build the understanding of quantity. The last number counted represents the quantity of the group. The ability to “hold” or remember the last number counted is an important skill needed before they can learn to “count on”.



“There are five stars.”

### Counting On –

Children who are able to “hold” the last number counted will be able to move forward with the strategy of *Counting On*. Using the stars above, a child will begin the *count* at five and *count on* the additional three stars.



### Number Relationships –

It is important to understand the relationships between numbers.

For example,

- Knowing five is one *greater than* four and five is one *less than* six.
- Understanding a set of five objects is made with 3 objects and two *more* objects.

## Kindergarten – Strategies

**Subitizing** - The ability to recognize a quantity without counting is called *subitizing*. The easiest arrangements to see are those found on dice or dominoes. Quantities up to 4 or 5 can generally be subitized. When children are able to subitize common dot patterns the ability to manipulate a larger arrangement of dots to find the total will be developed. This is foundational to understanding that numbers can be decomposed into smaller numbers.

Common patterns for three:



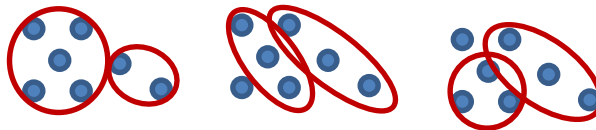
Common patterns for four and five:



Children will begin to break apart larger groups into smaller recognizable groups. Look at the configuration below.



The following three examples are common ways children might break apart the original configuration to find the total number of seven dots.

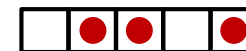


## Kindergarten – Math Tools

**Five Frames** are used with dots to build student fluency with small numbers.

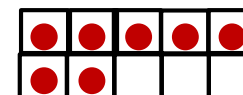
Students visualize the quantity shown and answer questions such as “How many do you see?” and/or “How many more to make 5?”.

They learn that the position of the counters within the five-frame does not influence the amount shown or the amount needed to make a 5.



**Ten Frames** are composed of two rows of 5 and are used to compute with addition and subtraction. The teacher shows 5 then asks “*How many more are needed to make 10?*”

The teachers shows 7 then asks “*How many are left after removing three?*”



**Number Bonds** are models used to show the part/part/whole relationships within numbers.

