

## Counting Principles

**Stable order** -- understanding that specific number words must be said in a certain order when counting.

**One-to-one correspondence** -- realizing that each object counted must have one and only one number word tag.

**Cardinality** -- knowing that the last item counted represents the total number of items.

## Subitization

**Subitizing** refers to the rapid, accurate, and confident judgment of number performed for small numbers of items. When you see a group of objects and immediately know how many, you are subitizing. Even small babies can subitize up to three. One of the easiest ways to subitize numbers is to arrange them in distinct patterns such as those found on dice.

Learn more about the research about babies and subitization at [http://agutie.homestead.com/files/world\\_news\\_map/baby\\_got\\_math\\_1.html](http://agutie.homestead.com/files/world_news_map/baby_got_math_1.html)

## Developmental Counting Strategies

**Count all** – the stage when a child counts both groups, then counts all of them over again to get the total.

**Counting on** – the stage when a child recognizes that the last number counted for the group is the number of items in the group and can continue counting the second group beginning with the name of the number of items in the first group.

**Counting on from largest number** – the stage when a child realizes that  $3+6$  is the same as  $6+3$  (commutative property) and chooses to count on from the larger number. It is more appropriate developmentally to use real objects rather than worksheets or pictures of objects as you provide opportunities for children to move through these development stages. This also addresses multiple learning styles. Ideas for supporting children as they move through these developmental stages can be found at <http://www.mathwire.com/strategies/countobj.html>

**Automatic recall of number facts** – the stage when a child has memorized the number fact families for addition, which is related to subtraction. Later they have memorized the multiplication fact families which segues into division without a remainder.