Developmental Milestones in Early Mathematics

The following record sheet is to assist teachers in capturing information on student progress throughout the school year. There are often subtle but significant differences in these big ideas in mathematics. Children who have these developmental understandings can consistently demonstrate observable behaviors as described. A key indicator is when a child is asked to perform a task and they respond as if the answer is obvious.

These behaviors, although developmental, are not necessarily sequential and are definitely not linear. It is important to monitor and provide ample experiences in a variety of settings to develop these ideas. It is more important to provide rich experiences and challenge students’ thinking or misconceptions through questioning. If students are not developmentally ready to learn a concept, it is not appropriate to “tell” the student until they “get it” as this will result in little understanding and retention.

**Number**

* Tagging with synchrony - each object must be touched or included exactly once as the numbers are said in sequence without skipping any objects or numbers.
* 1:1 correspondence - each object in a set has a corresponding match to each object included in a set, then sets are equivalent. e.g. each child gets one napkin.
* The numbers must be said once and in the conventional order.
* Cardinality - the last number said tells how many.
* Subitizing - Can see at a glance quantities (images)of up to 5 (dots) through instant recognition. Can see at a glance quantities (images) larger than 5 as composed of two numbers together, e.g. 2 on the top and 4 on the bottom.
* Sets of objects up 5 are compared more/less/same (extension -objects to 10)
* Conservation of number - the arrangement of the objects does not affect how many there are. The objects can be touched in any order (or any starting point) and the order in which the objects are counted does not affect how many there are.
* Hierarchal Inclusion – numbers grow one, and exactly one, each time.
* Numeral writing 0-9
* Numerals 0-9 are identified