



Mathematical Development Concepts

| Strategies | | |
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| Concept | Definition | Example |
| Rote Counting | Reciting the names of the numerals in order or sequence. | "1,2,3,4,5..." |
| Tagging | Linking a single number name with one object, and only one, at a time. Student may still not recite the names of numerals in order. | |
| Synchronic Counting | Counting, saying one number for each object | |

| Big Ideas | | |
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| One-to-One Correspondence | Matching objects from one set to objects of an equal set. | |
| Magnitude | Knowing which one has more. | |
| Cardinality | Attaching a number name to a series of objects; to understand that the number spoken when tagging or touching the last object also identifies the total number in the group. | |
| Conservation | Recognizing equivalent collections of items despite appearances. | |
| Hierarchical Inclusion | The idea that numbers build by exactly one each time and that they nest within each other by this amount. | |
| Unitizing | Standard grouping of a specified number used to represent quantities. Underlies the understanding of place value; ten objects become one ten. | |
| Subitizing | Understanding that objects can be seen as a whole. Children can perceive the amount without needing to count. | |

Adapted from information found in Young Mathematicians At Work by Cathy Twomey Fosnot