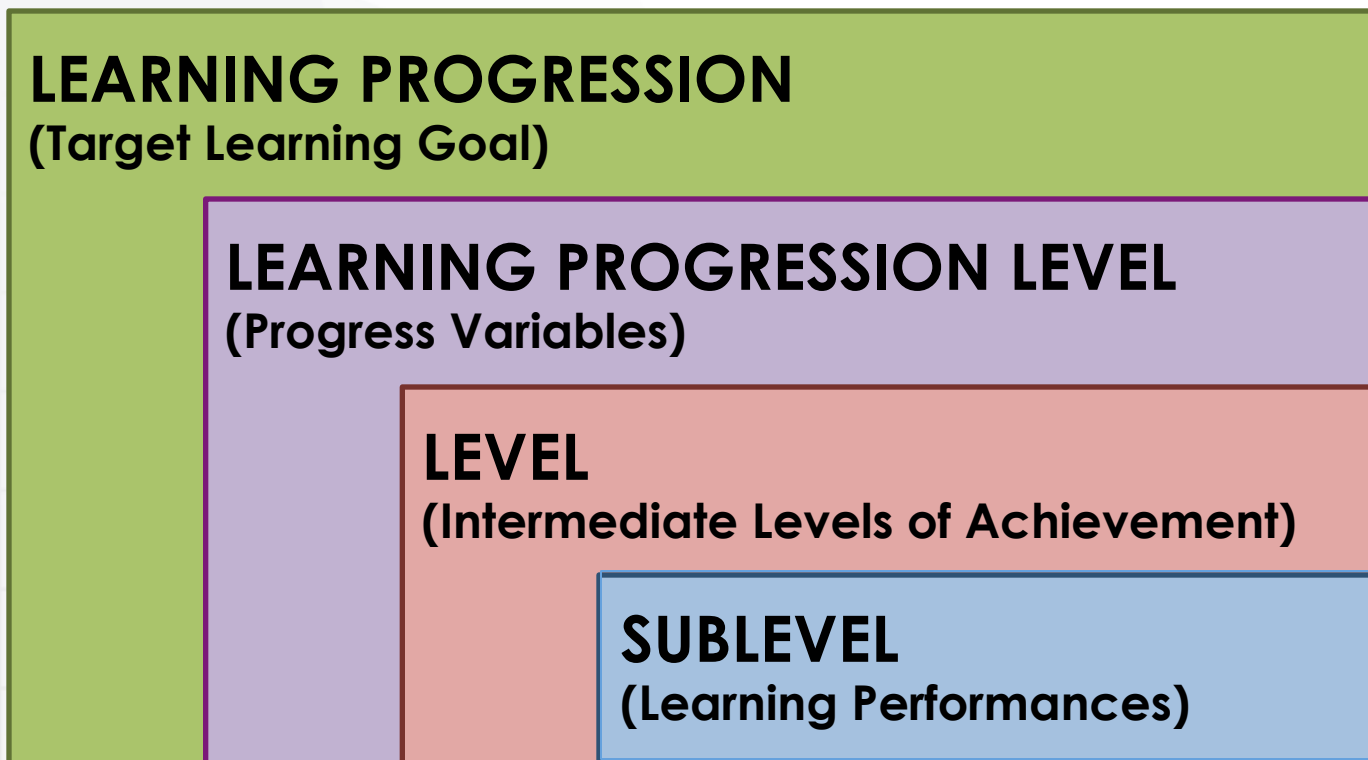
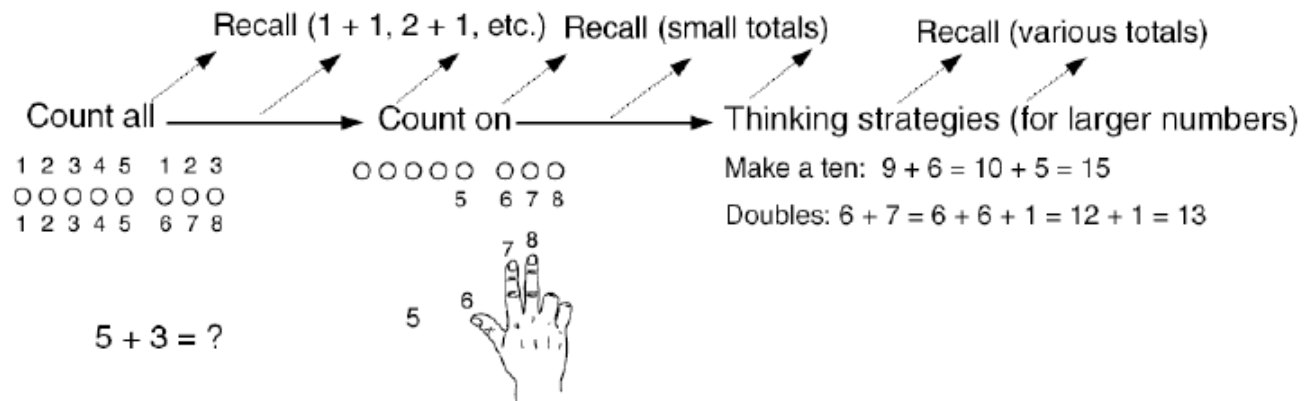


A Step-down Approach to a Learning Progression



Math Example

Learning Progression for Single-Digit Addition



From *Adding It Up: Helping Children Learn Mathematics*, NRC, 2001.

Math Example

Table 1. DELTA equipartitioning learning trajectory at the time of the study.

| Case | Level |
|--------|-----------------------------------------------------------------------------------------------------------------|
| Case D | 1.8 m objects shared among p people, $m > p$ |
| Case C | 1.7 m objects shared among p people, $p > m$ |
| Case B | 1.6 Splitting a continuous whole object into odd # of parts ($n > 3$) |
| Case B | 1.5 Splitting a continuous whole object among $2n$ people, $n > 2$, and $2n \neq 2^i$ |
| Case B | 1.4 Splitting continuous whole objects into three parts |
| Case B | 1.3 Splitting continuous whole objects into 2^n shares, with $n > 1$ |
| Case A | 1.2 Dealing discrete items among $p = 3 - 5$ people, with no remainder; mn objects, $n = 3, 4, \text{ or } 5$ |
| Case B | 1.1 Partitioning using 2-split (continuous and discrete quantities) |