### Essential Element, Linkage Levels, and Mini-Map

#### Math: Grade 3

**M.EE.3.NBT.2**

<table>
<thead>
<tr>
<th>Grade-Level Standard</th>
<th>DLM Essential Element</th>
<th>Linkage Levels</th>
</tr>
</thead>
</table>
| **M.3.NBT.2** Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction | **M.EE.3.NBT.2** Demonstrate understanding of place value to tens | **Initial Precursor:**  
- Recognize separateness  
- Recognize set  
**Distal Precursor:**  
- Explain ten as a composition of ten ones  
**Proximal Precursor:**  
- Recognize multiple tens and something  
- Compose numbers based on tens  
**Target:**  
- Explain place value for ones and tens  
**Successor:**  
- Explain the relationship between rounding and place value  
- Explain place value for hundreds |

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A diagram showing the relationship of nodes in the mini-map appears below.

**Key to map codes in upper right corner of node boxes:**

- IP Initial Precursor
- SP Supporting
- DP Distal Precursor
- S Successor
- PP Proximal Precursor
- UN Untested
- T Target
M.EE.3.NBT.2- Demonstrate understanding of place value to tens
# Essential Element, Linkage Levels, and Mini-Map

**Math: Grade 3**  
**M.EE.3.NBT.3**

<table>
<thead>
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<th>Grade-Level Standard</th>
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</table>
| M.3.NBT.3 Multiply one-digit whole numbers by multiples of 10 in the range 10-90 (e.g., 9 x 80, 5 x 60) using strategies based on place value and properties of operations | M.EE.3.NBT.3 Count by tens using models such as objects, base ten blocks, or money | Initial Precursor:  
- Recognize before  
- Recognize after  
Distal Precursor:  
- Explain number sequence pattern  
Proximal Precursor:  
- Rote count to 30  
- Count to 30  
Target:  
- Skip count by 10s  
Successor:  
- Skip count by 10s starting at a multiple of 10  
- Count with dimes  
- Count with 10 dollar bills  
- Explain repeated addition |

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<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP</td>
<td>Initial Precursor</td>
<td>SP</td>
<td>Supporting</td>
</tr>
<tr>
<td>DP</td>
<td>Distal Precursor</td>
<td>S</td>
<td>Successor</td>
</tr>
<tr>
<td>PP</td>
<td>Proximal Precursor</td>
<td>UN</td>
<td>Untested</td>
</tr>
<tr>
<td>T</td>
<td>Target</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
M.EE.3.NBT.3 Count by tens using models such as objects, base ten blocks, or money
## Math: Grade 3

**M.EE.3.NF.1-3**

<table>
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</table>
| **M.3.NF.1** Understand a fraction $\frac{1}{b}$ as the quantity formed by 1 part when a whole is partitioned into $b$ equal parts; understand a fraction $\frac{a}{b}$ as the quantity formed by $a$ parts of size $\frac{1}{b}$.; **M.3.NF.2** Understand a fraction as a number on the number line; represent fractions on a number line diagram.; **M.3.NF.3** Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size | **M.EE.3.NF.1-3** Differentiate a fractional part from a whole | **Initial Precursor:**  
- Recognize some  
**Distal Precursor:**  
- Recognize separateness  
- Recognize wholeness  
**Proximal Precursor:**  
- Partition shapes  
**Target:**  
- Recognize parts of a given whole or a unit  
- Explain unit fraction  
**Successor:**  
- Recognize fraction  
- Recognize whole on an area model  
- Recognize one half on an area model |

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- SP Supporting
- DP Distal Precursor
- S Successor
- PP Proximal Precursor
- UN Untested
- T Target
M.EE.3.NF.1-3 Differentiate a fractional part from a whole
**Grade-Level Standard** | **DLM Essential Element** | **Linkage Levels**
--- | --- | ---
M.3.OA.4 Determine the unknown whole number in a multiplication or division equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = _{-} \div 3$, $6 \times 6 = ?$ | M.EE.3.OA.4 Solve addition and subtraction problems when result is unknown, limited to operands and results within 20 |
| Initial Precursor: | Distal Precursor: | Proximal Precursor: |
- Recognize separateness | - Combine sets | - Recognize the addition sign |
- Recognize set | - Demonstrate the concept of addition | - Explain the function of the addition sign |
| Target: | Proxy Precursor: | - Represent addition with equations |
- Determine the unknown in a subtraction equation | - Recognize the subtraction sign | - Recognize the equal sign |
- Determine the unknown in an addition equation | - Explain the function of the minus sign | - Explain the function of the equal sign |
| Successor: | | - Represent subtraction with equations |
- Solve join problems | | - Recognize subtraction with equations |
- Solve part-part-whole problems | | - Recognize the equal sign |
- Solve compare problems | | - Explain the function of the equal sign |
- Solve separate problems | | |

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- **DP** Distal Precursor
- **S** Successor
- **PP** Proximal Precursor
- **UN** Untested
- **T** Target

**M.3.OA.4** Determine the unknown whole number in a multiplication or division equation relating three whole numbers. *For example, determine the unknown number that makes the equation true in each of the equations* $8 \times ? = 48$, $5 = _\div 3$, $6 \times 6 = ?$
# Essential Element, Linkage Levels, and Mini-Map

**Math: Grade 3**

**M.EE.3.G.2**

<table>
<thead>
<tr>
<th>Grade-Level Standard</th>
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<th>Linkage Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>M. 3.G.2 Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as ¼ of the area of the shape</td>
<td>M.EE.3.G.2 Recognize that shapes can be partitioned into equal areas</td>
<td>Initial Precursor:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Recognize unit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Recognize wholeness</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Recognize parts of a given whole or a unit</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Distal Precursor:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Partition shapes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proximal Precursor:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Model equal part</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Partition circle into 2 equal parts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Partition circle into 3 equal parts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Partition circle into 4 equal parts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Partition a rectangle into rows and columns</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Partition rectangle into 2 equal parts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Partition rectangle into 3 equal parts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Partition rectangle into 4 equal parts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Target:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Partition any shape into equal parts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Successor:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Recognize one tenth on an area model</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Recognize one third on an area model</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Recognize one half on an area model</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Recognize one fourth on an area model</td>
</tr>
</tbody>
</table>

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- S Successor
- PP Proximal Precursor
- UN Untested
- T Target
M.EE. 3.G.2 Recognize attributes of two-dimensional shapes
## M.EE.3.MD.1

### Grade-Level Standard

**M.3.MD.1** Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line.

### DLM Essential Element

**M.EE.3.MD.1** Tell time to the hour on a digital clock.

### Linkage Levels

- **Initial Precursor:**
  - Attend
  - Recognize different

- **Distal Precursor:**
  - Recognize measurable attributes

- **Proximal Precursor:**
  - Recognize the hour on a digital clock
  - Recognize the minute on a digital clock

- **Target:**
  - Tell time to the hour

- **Successor:**
  - Tell time to the half hour
  - Tell time to the quarter hour

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- T Target
M.EE. 3.MD.1 Tell time to the hour on a digital clock
# Essential Element, Linkage Levels, and Mini-Map

## Math: Grade 3

### M.EE.3.MD.4

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<thead>
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</tr>
</thead>
</table>
| M.3.MD.4 Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units—whole numbers, halves, or quarters | M.EE.3.MD.4 Measure length of objects using standard tools, such as rulers, yardsticks, and meter sticks | Initial Precursor:  
- Recognize attribute values  
Distal Precursor:  
- Make direct comparison of 2 lengths  
Proximal Precursor:  
- Demonstrate iteration of length unit  
- Measure length using informal units  
Target:  
- Use an appropriate tool to measure length using inches  
- Use an appropriate tool to measure length using feet  
Successor:  
- Compare lengths of 2 or more objects using standard tools |

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- **S** Successor  
- **PP** Proximal Precursor  
- **UN** Untested  
- **T** Target
M.EE.3.MD.4 Measure length of objects using standard tools, such as rulers, yardsticks, and meter sticks
# M.EE.3.MD.3

**Math: Grade 3**

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</table>
| M.3.MD.3 Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using pictures presented in scaled bar graphs | M.EE.3.MD.3 Use picture or bar graph data to answer questions about data | **Initial Precursor:**  
- Recognize attribute values  
- Arrange objects in pairs  

**Distal Precursor:**  
- Classify  
- Order objects  

**Proximal Precursor:**  
- Recognize the structure of a bar graph  
- Recognize the structure of a picture graph  

**Target:**  
- Use bar graphs to read the data  
- Use picture graphs to read the data  

**Successor:**  
- Use graphs to read between the data

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M.EE.3.MD.3 Use picture or bar graph data to answer questions about data
### Essential Element, Linkage Levels, and Mini-Map

**Math: Grade 3**

**M.EE.3.OA.1-2**

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<tr>
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</tr>
</thead>
</table>
| M.3.OA.1 Interpret products of whole numbers, e.g., interpret $5 \times 7$ as the total number of objects in 5 groups of 7 objects each. For example, describe a context in which a total number of objects can be expressed as $5 \times 7$; M.3.OA.2 Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each | M.EE.3.OA.1-2 Use repeated addition to find the total number of objects and determine the sum | **Initial Precursor:**  
- Recognize subset  
- Recognize set  
- Recognize separateness  

**Distal Precursor:**  
- Demonstrate the concept of addition  
- Combine sets  
- Combine  

**Proximal Precursor:**  
- Represent repeated addition with an equation  
- Represent repeated addition with a model  

**Target:**  
- Solve repeated addition problems  

**Successor:**  
- Demonstrate the concept of multiplication  

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**M.EE. 3.OA.1-2** Use repeated addition to find the total number of objects and determine the sum.
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</thead>
<tbody>
<tr>
<td>M.3.OA.8</td>
<td>M.EE. 3.OA.8</td>
<td>Initial Precursor:</td>
</tr>
<tr>
<td></td>
<td>Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding</td>
<td>• Combine sets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Partition sets</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Distal Precursor:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Demonstrate the concept of addition</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Demonstrate the concept of subtraction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Proximal Precursor:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Determine the unknown in an addition equation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Determine the unknown in a subtraction equation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Target:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Solve subtraction word problems within 100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Solve addition word problems within 100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Successor:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Solve 2-step addition and subtraction word problems</td>
</tr>
</tbody>
</table>

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M.EE. 3.OA.8 Solve one-step real world problems using addition or subtraction within 20
### Essential Element, Linkage Levels, and Mini-Map
**Math: Grade 3**

#### M.EE.3.OA.9

<table>
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</thead>
</table>
| M.3.OA.9 Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4, multiplied by any number can be decomposed into two equal addends (4x2 is equal to 4+4). | M.EE.3.OA.9 Identify arithmetic patterns | **Initial Precursor:**  
- Recognize same  
- Recognize different  

**Distal Precursor:**  
- Order objects  
- Classify  
- Contrast objects  

**Proximal Precursor:**  
- Recognize patterns  

**Target:**  
- Recognize repeating patterns  
- Recognize symbolic patterns  
- Recognize growing patterns  

**Successor:**  
- Extend a symbolic pattern by applying the rule  
- Recognize the pattern rule in a growing pattern  

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- PP Proximal Precursor  
- UN Untested  
- T Target
M.EE.3.OA.9 Identify arithmetic patterns