## Essential Element, Linkage Levels, and Mini-Map
### Math: High School

#### M.EE.A-CED.1

<table>
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<th>Grade-Level Standard</th>
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| **M.A-CED.1** Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions | **M.EE.A-CED.1** Create an equation involving one operation with one variable, and use it to solve a real-world problem | **Initial Precursor**  
- Combine sets  
- Partition sets  

**Distal Precursor**  
- Represent multiplication with equations  
- Represent division with equations  
- Represent subtraction with equations  
- Represent addition with equations  

**Proximal Precursor**  
- Represent expressions with variables  
- Represent the unknown in an equation  

**Target**  
- Solve real-world problems using equations with non-negative rational numbers  
- Represent real-world problems as equations  

**Successor**  
- Solve rational equations in 1 variable |

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How is the Initial Precursor related to the Target?

**Initial Precursor:** The knowledge needed to create an equation requires students to manipulate sets (i.e., combining and separating or partitioning). Provide students many opportunities to take a set of objects (e.g., tiles, linking cubes, buttons) and separate them based on a given characteristic (e.g., shape, color, size) into two distinct sets, then separate them again based on another characteristic. Guide students to notice how the set size changes each time you combine or partition the sets.

![Diagram showing set manipulation](image)

How is the Distal Precursor related to the Target?

**Distal Precursor:** As students begin to understand labeling and counting sets, they begin to use the number sequence and become more adept at tracking individual objects. Work on this skill using a variety of sets, labeling and counting the sets, and moving items in and out of the sets, labeling and counting the set again. Additionally, the educators will pair those sets with the symbolic representations for addition, subtraction, multiplication, and division (e.g., $3 + 2 = ?$, $3 \times 2 = ?$).

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.A-CED.1 Create an equations involving one operation with one variable, and use it to solve a real-world problem