# ESSENTIAL ELEMENT, LINKAGE LEVELS, AND MINI-MAP
## MATH: GRADE 5
## M.EE.5.NF.1

| Grade-Level Standard | DLM Essential Element | Linkage Levels |
|---|---|---|
| **M.5.NF.1** Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators. For example, 2/3 + 5/4 = 8/12 + 15/12 = 23/12. (In general, a/b + c/d = (ad + bc)/bd.) | **M.EE.5. NF.1** Identify models of halves (1/2, 2/2) and fourths (1/4, 2/4, 3/4, 4/4) | **Initial Precursor:**<br>• Recognize some<br>• Recognize separateness<br>**Distal Precursor:**<br>• Partition sets into equal subsets<br>• Partition any shape into equal parts<br>**Proximal Precursor:**<br>• Recognize one fourth in a set model<br>• Recognize one half in a set model<br>• Recognize one half on and area model<br>• Recognize one fourth on an area model<br>**Target:**<br>• Recognize fourths in a set model<br>• Recognize halves in a set model<br>• Recognize halves on an area model<br>• Recognize fourths on an area model<br>**Successor:**<br>• Recognize proper fractions with a set model<br>• Recognize proper fractions with an area model |



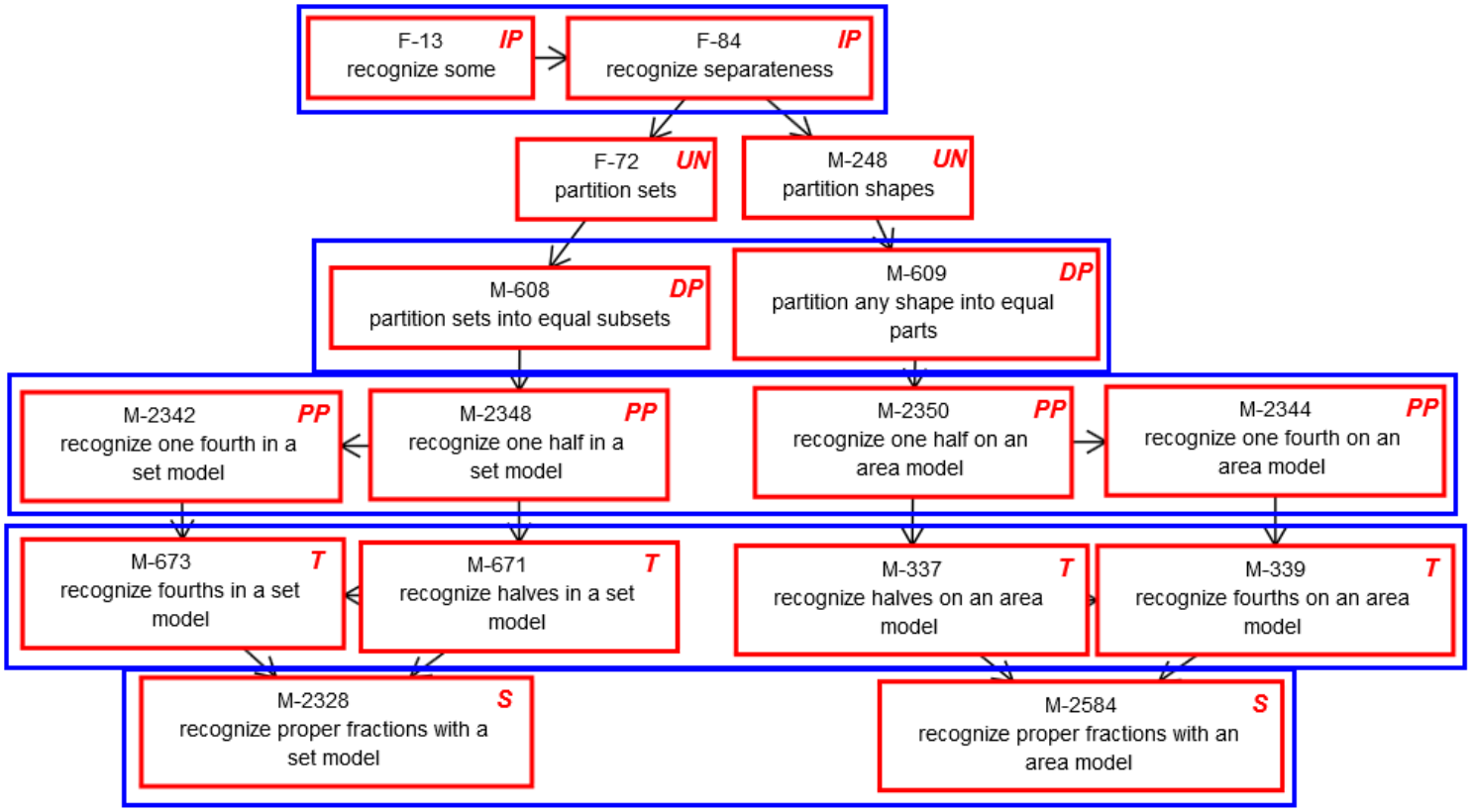
A diagram showing the relationship of nodes in the mini-map appears below.

*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. 5.NF.1** Identify models of halves (1/2, 2/2) and fourths (1/4, 2/4, 3/4, 4/4)



# ESSENTIAL ELEMENT, LINKAGE LEVELS, AND MINI-MAP
## MATH: GRADE 5
## M.EE.5.NF.2

| Grade-Level Standard | DLM Essential Element | Linkage Levels |
|---|---|---|
| **M.5.NF.2** Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators | **M.EE.5.NF.2** Identify models of thirds (1/3, 2/3, 3/3) and tenths (1/10, 2/10, 3/10, 4/10, 5/10, 6/10, 7/10, 8/10, 9/10, 10/10) | **Initial Precursor:**<br>• Recognize some<br>• Recognize separateness<br>**Distal Precursor:**<br>• Partition any shape into equal parts<br>**Proximal Precursor:**<br>• Recognize one third on an area model<br>• Recognize one tenth on an area model<br>**Target:**<br>• Recognize thirds on an area model<br>• Recognize tenths on an area model<br>**Successor:**<br>• Recognize proper fractions with an area model |



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

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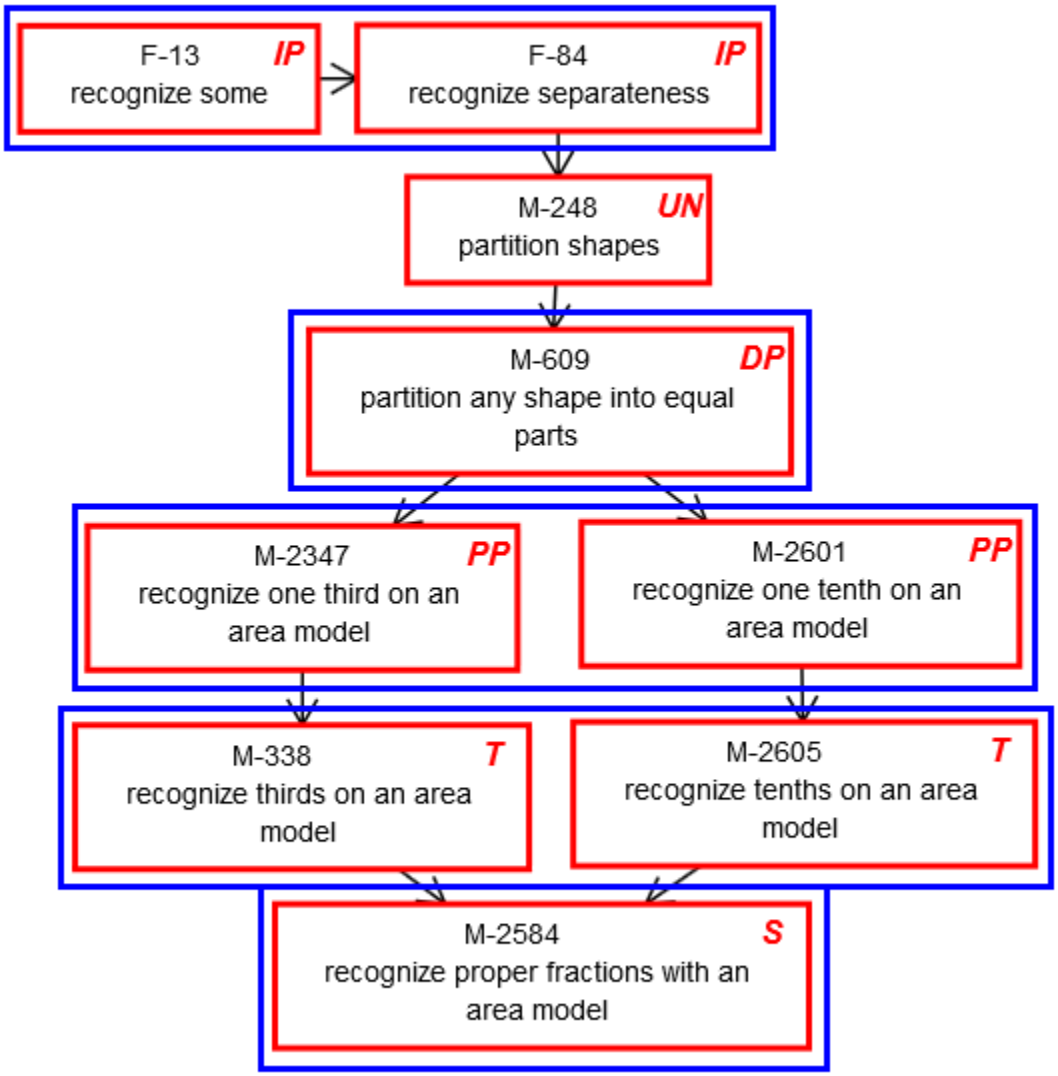
|---|---|---|---|
| IP | Initial Precursor | SP | Supporting |
| DP | Distal Precursor | S | Successor |
| PP | Proximal Precursor | UN | Untested |
| T | Target | | |

**M.EE.5.NF.2** Identify models of thirds (1/3, 2/3, 3/3) and tenths (1/10, 2/10, 3/10, 4/10, 5/10, 6/10, 7/10, 8/10, 9/10, 10/10)



# ESSENTIAL ELEMENT, LINKAGE LEVELS, AND MINI-MAP
## MATH: GRADE 5
## M.EE.5.NBT.1

| Grade-Level Standard | DLM Essential Element | Linkage Levels |
|---|---|---|
| **M.5.NBT.1** Recognize that in a multi-digit number, a digit in one place represents 10 times as much as it represents in the place to its right and 1/10 of what it represents in the place to its left | **M.EE.5.NBT.1** Compare numbers up to 99 using base ten models | **Initial Precursor:**<br>• Recognize separateness<br>• Recognize set<br>**Distal Precursor:**<br>• Count all objects in a set or subset<br>• Recognize same number of<br>• Recognize different number of<br>• Recognize more number of<br>• Recognize fewer number of<br>**Proximal Precursor:**<br>• Compare 2 quantities up to 10 using models<br>**Target:**<br>• Compare 2 quantities up to 100 using models<br>**Successor:**<br>• Compare 2 numerals up to 100 using symbols (=, <, >)<br>• Order more than 2 two-digit numerals or quantities from greatest to least<br>• Order more than 2 two-digit numerals or quantities from least to greatest |



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

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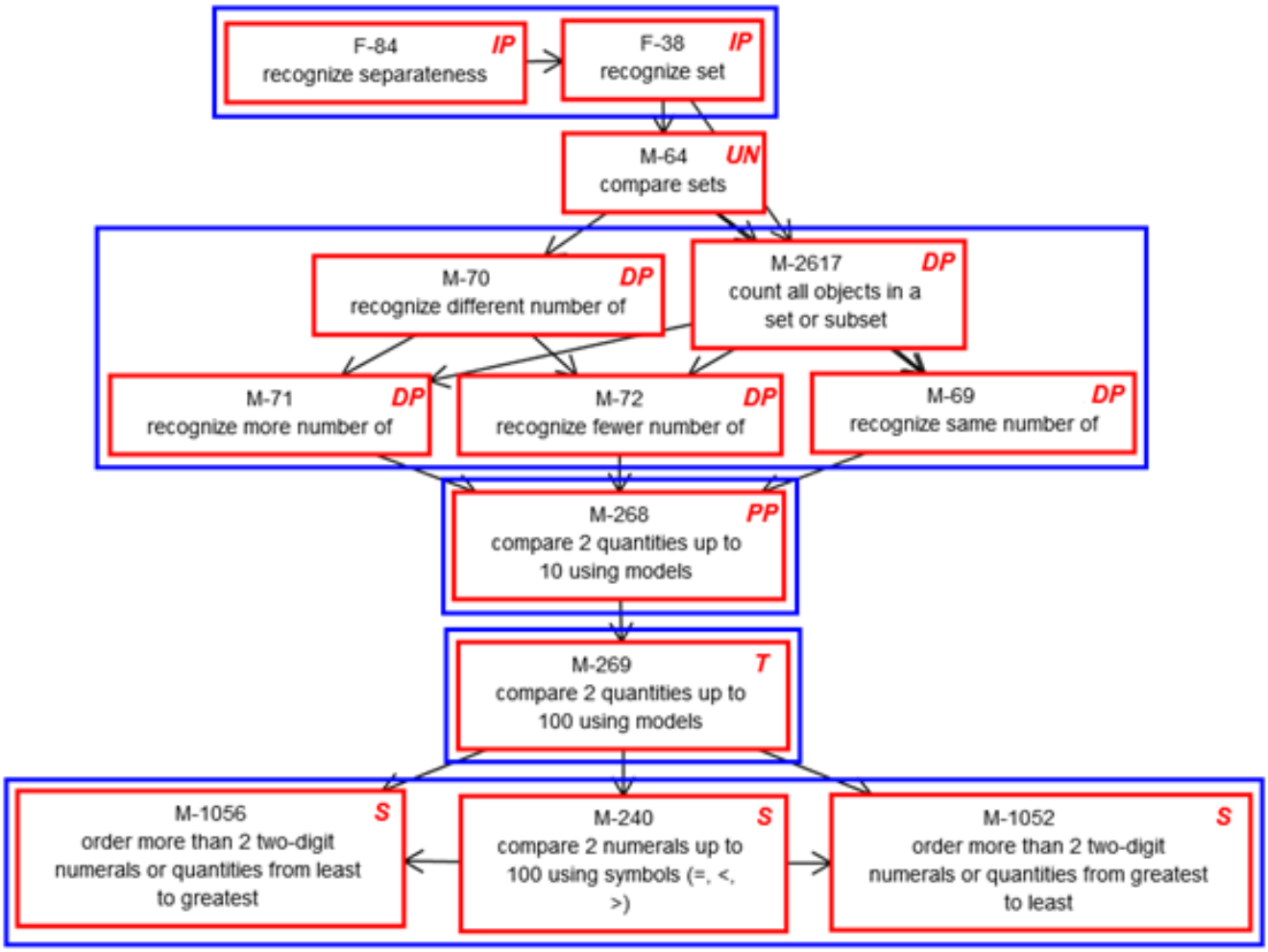
| | | | |
|---|---|---|---|
| IP | Initial Precursor | SP | Supporting |
| DP | Distal Precursor | S | Successor |
| PP | Proximal Precursor | UN | Untested |
| T | Target | | |

**M.EE.5.NBT.1** Compare numbers up to 99 using base ten models



# ESSENTIAL ELEMENT, LINKAGE LEVELS, AND MINI-MAP
## MATH: GRADE 5
## M.EE.5.NBT.3

| Grade-Level Standard | DLM Essential Element | Linkage Levels |
|---|---|---|
| **M.5.NBT.3, 5.NBT.3.a, 5.NBT.3.b** Read, write, and compare decimals to 1000ths | **M.EE.5.NBT.3** Compare whole numbers up to 100 using symbols (<, >, =) | **Initial Precursor:**<br>• Recognize separateness<br>• Recognize set<br>**Distal Precursor:**<br>• Compare 2 quantities up to 10 using models<br>**Proximal Precursor:**<br>• Compare 2 numerals up to 10 using symbols (=, <,>)<br>**Target:**<br>• Compare 2 numerals up to 100 using symbols (=,<,>)<br>**Successor:**<br>• Compare 2 numerals up to 1000 using symbols (==, <, >)<br>• Order more than 2 two-digit numerals or quantities from greatest to least<br>• Order more than 2 two-digit numerals or quantities from least to greatest |

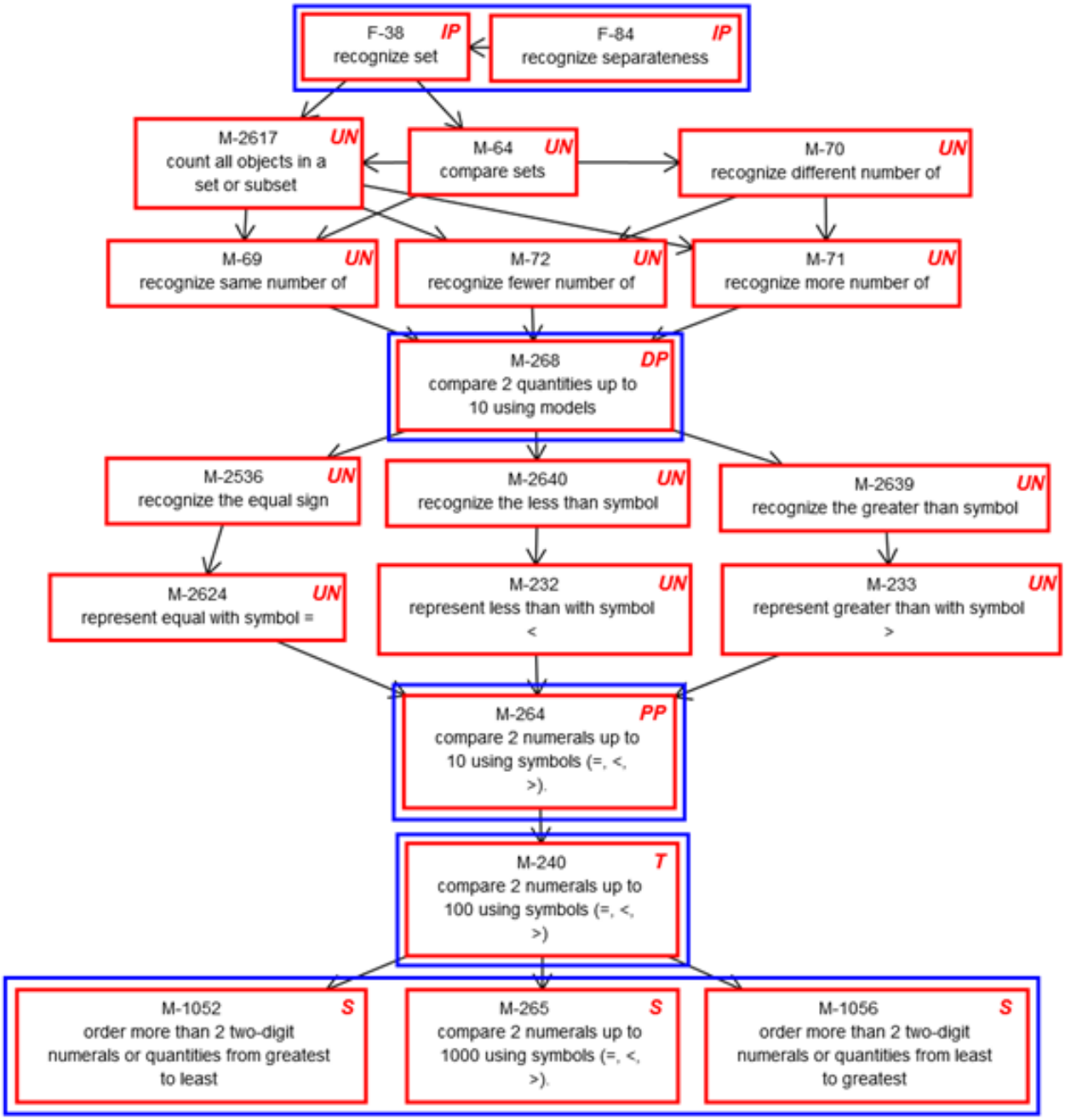


A diagram showing the relationship of nodes in the mini-map appears below.

*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.5.NBT.3** Compare whole numbers up to 100 using symbols (<, >, =)



# ESSENTIAL ELEMENT, LINKAGE LEVELS, AND MINI-MAP
## MATH: GRADE 5
## M.EE.5.NBT.4

| Grade-Level Standard | DLM Essential Element | Linkage Levels |
|---|---|---|
| **M.5.NBT.4** Use place value understanding to round decimals to any place | **M.EE.5.NBT.4** Round two-digit whole numbers to the nearest 10 from 0-90 | **Initial Precursor:**<br>• Use perceptual subitizing<br>**Distal Precursor:**<br>• Recognize ten and something<br>• Recognize multiple tens and something<br>• Decompose numbers based on tens<br>• Explain ten as a composition of ten ones<br>• Recognize a unit<br>**Proximal Precursor:**<br>• Explain place value for ones and tens<br>• Explain the relationship between rounding and place value<br>**Target:**<br>• Round whole numbers 0-100 to the nearest ten<br>**Successor:**<br>• Round whole numbers to the nearest hundred |



A diagram showing the relationship of nodes in the map begins on the next page.

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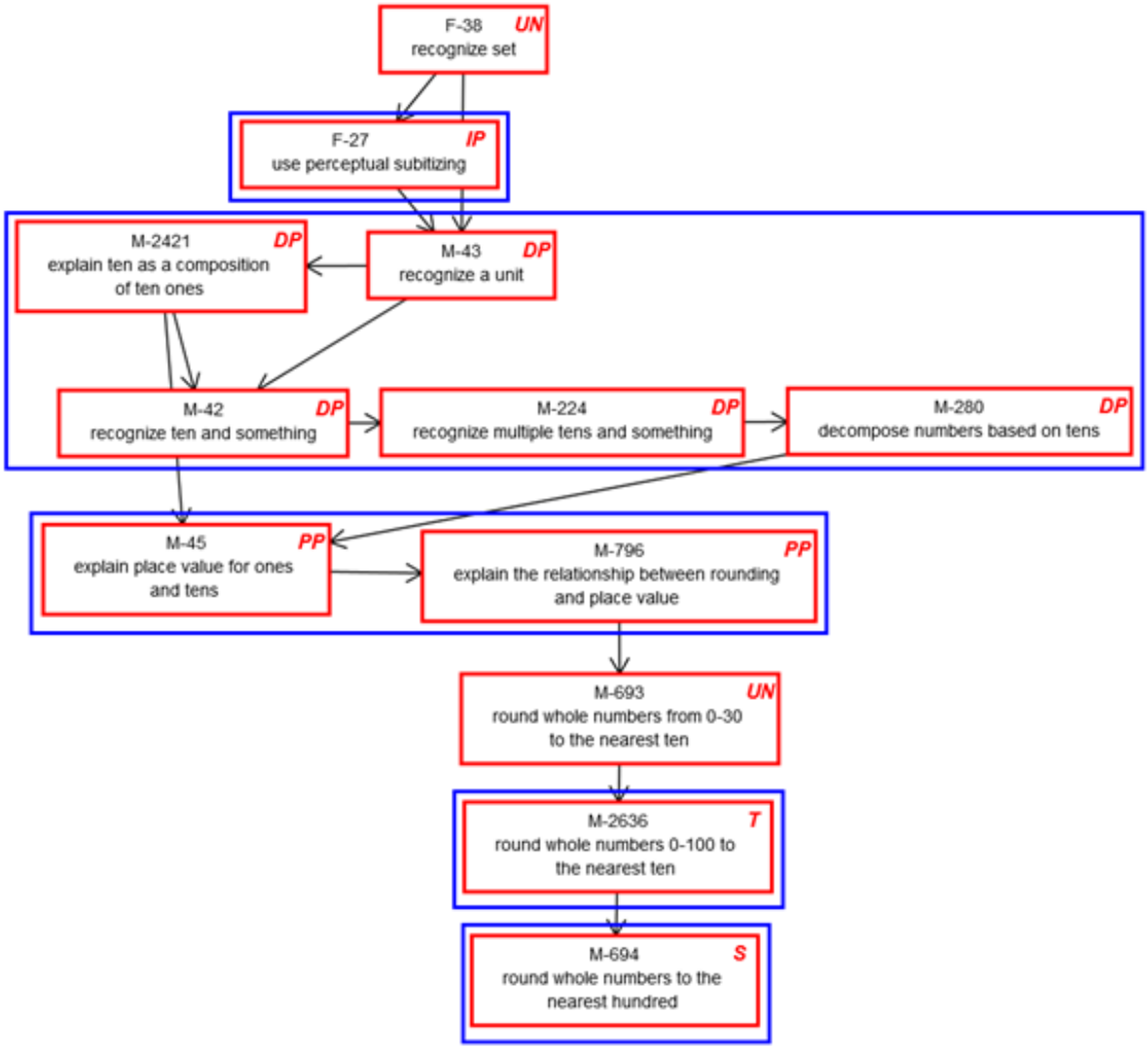
| | | | |
|---|---|---|---|
| IP | Initial Precursor | SP | Supporting |
| DP | Distal Precursor | S | Successor |
| PP | Proximal Precursor | UN | Untested |
| T | Target | | |

**M.EE.5.NBT.4** Round two-digit whole numbers to the nearest 10 from 0-90



# ESSENTIAL ELEMENT, LINKAGE LEVEL, AND MINI-MAP
## MATH: GRADE 5
## M.EE.5.NBT.5

| Grade-Level Standard | DLM Essential Element | Linkage Level |
|---|---|---|
| **M.5.NBT.5** Fluently multiply multi-digit whole numbers using the standard algorithm | **M.EE.5.NBT.5** Multiply whole numbers up to 5 x 5 | **Initial Precursor:**<br>• Recognize separateness<br>• Recognize set<br>• Recognize subset<br>**Distal Precursor:**<br>• Explain repeated addition<br>• Represent repeated addition with an equation<br>• Solve repeated addition problems<br>**Proximal Precursor:**<br>• Demonstrate the concept of multiplication<br>**Target:**<br>• Multiply by 1<br>• Multiply by 2<br>• Multiply by 3<br>• Multiply by 4<br>• Multiply by 5<br>**Successor:**<br>• Apply the relationship between multiplication and division |



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

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| | | | |
|---|---|---|---|
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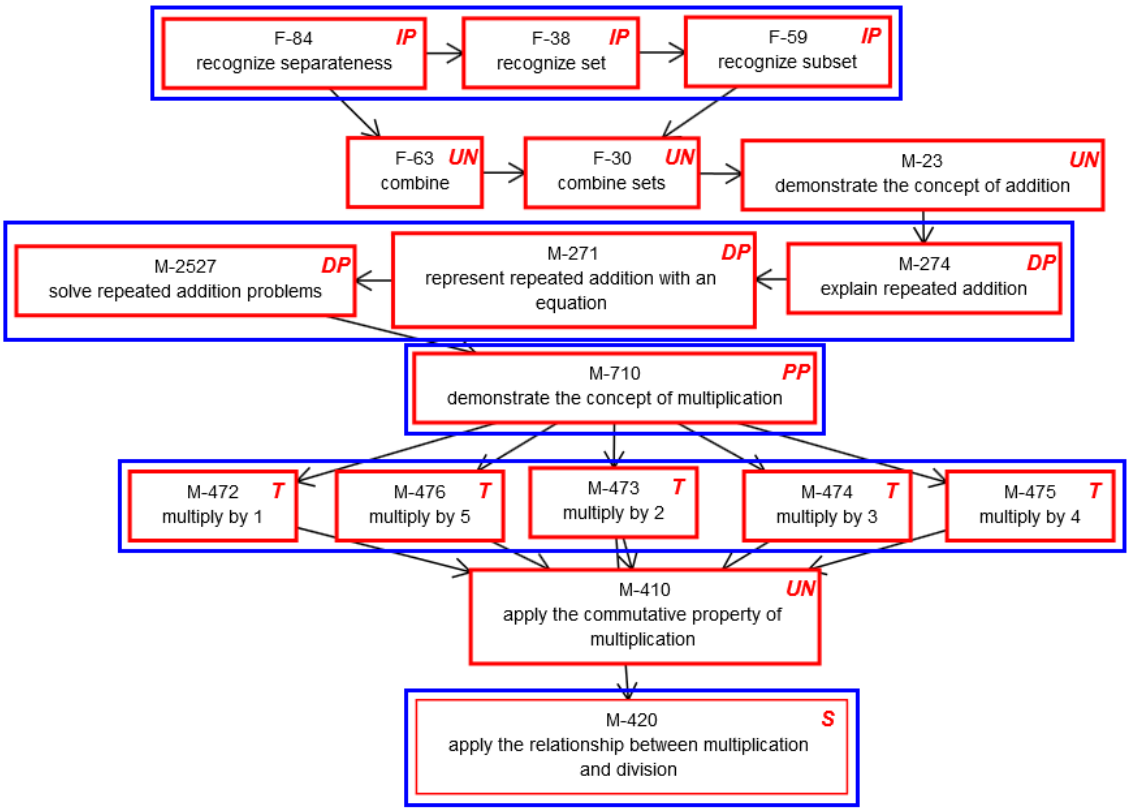
| PP | Proximal Precursor | UN | Untested |
| T | Target | | |

**M.EE.5.NBT.5** Multiply whole numbers up to 5 x 5



# ESSENTIAL ELEMENT, LINKAGE LEVELS, AND MINI-MAP
## MATH: GRADE 5
## M.EE.5.NBT.6-7

| Grade-Level Standard | DLM Essential Element | Linkage Levels |
|---|---|---|
| **M.5.NBT.6** Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models**; M.5.NBT.7** Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used | **M.EE.5.NBT.6-7** Illustrate the concept of division using fair and equal shares | **Initial Precursor:**<br>• Recognize separateness<br>• Recognize set<br>• Recognize subset<br>**Distal Precursor:**<br>• Model equal set<br>• Recognize equal<br>• Recognize same number of<br>**Proximal Precursor:**<br>• Partition sets<br>**Target:**<br>• Partition sets into equal subsets<br>**Successor:**<br>• Demonstrate the concept of division<br>• Explain repeated subtraction |



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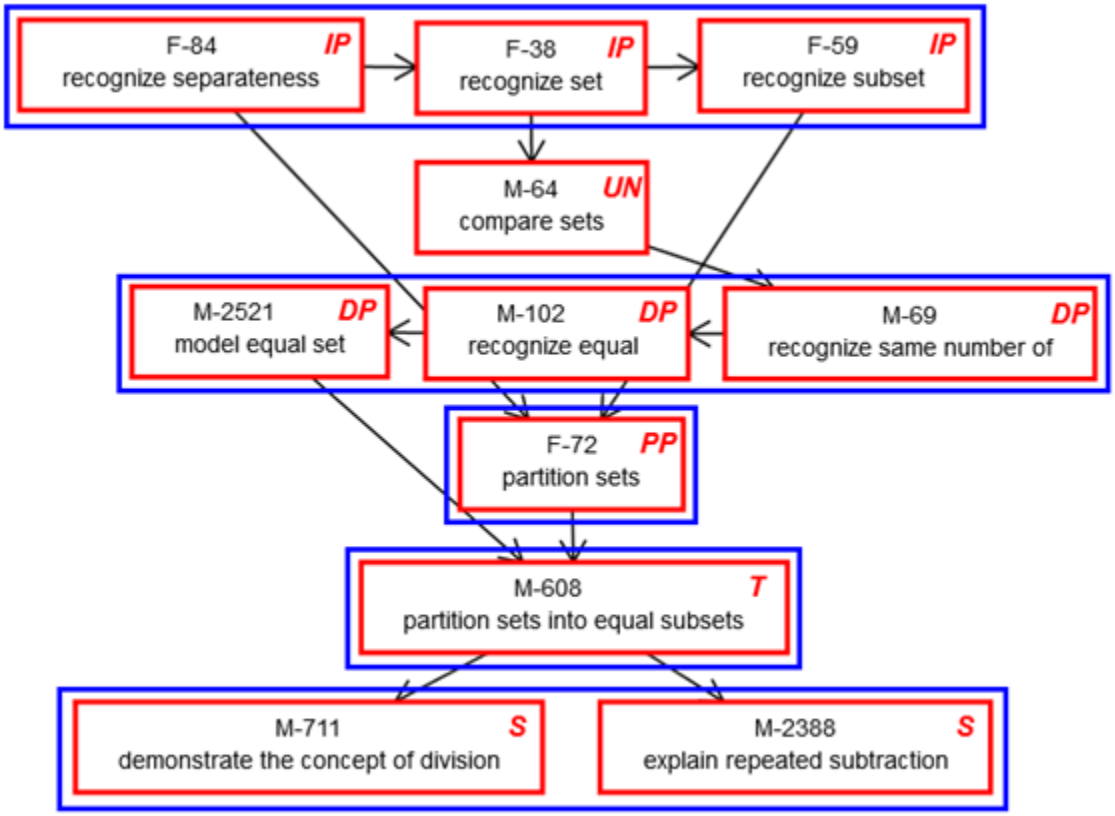
| T | Target | | |

**M.EE.5.NBT.6-7** Illustrate the concept of division using fair and equal shares



# ESSENTIAL ELEMENT, LINKAGE LEVELS, AND MINI-MAP
## MATH: GRADE 5
## M.EE.5.G.1-4

| Grade-Level Standard | DLM Essential Element | Linkage Levels |
|---|---|---|
| **M.5.G.1** Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond**; M.5.G.2** Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation**; M.5.G.3** Understand that attributes belonging to a category of two-dimensional figures also belong to all subcategories of that category**; M.5.G.4** Classify two-dimensional figures in a hierarchy based on properties | **M.EE.5.G.1-4** Sort two-dimensional figures and identify the attributes (angles, number of sides, corners, color) they have in common | **Initial Precursor:**<br>• Recognize same<br>• Recognize different<br>**Distal Precursor:**<br>• Classify same two-dimensional shapes with same size and same orientation<br>• Classify same two-dimensional shapes with different size and/or different orientation<br>**Proximal Precursor:**<br>• Describe attributes of shapes<br>**Target:**<br>• Analyze shapes to identify common attributes<br>**Successor:**<br>• Explain attribute relationships between shapes |

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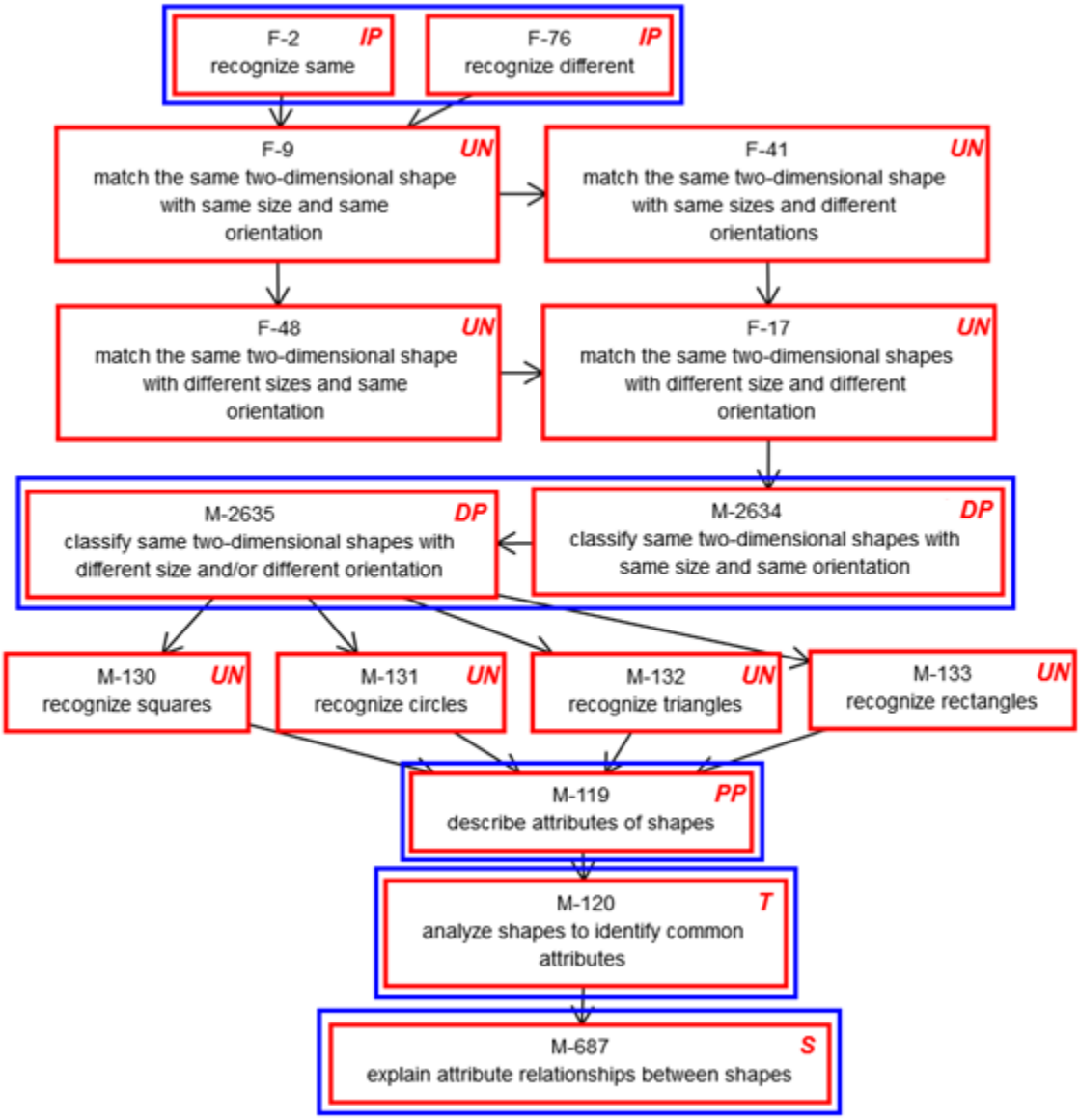
| T | Target | | |

**M.EE.5.G.1-4** Sort two-dimensional figures and identify the attributes (angles, number of sides, corners, color) they have in common



# ESSENTIAL ELEMENT, LINKAGE LEVELS, AND MINI-MAP
## MATH: GRADE 5
## M.EE.5.MD.3

| Grade-Level Standard | DLM Essential Element | Linkage Levels |
|---|---|---|
| **M.5.MD.3** Recognize volume as an attribute of solid figures and understand concepts of volume measurement | **M.EE.5.MD.3** Identify common three-dimensional shapes | **Initial Precursor:**<br>• Notice what is new<br>**Distal Precursor:**<br>• Recognize same<br>• Recognize different<br>**Proximal Precursor:**<br>• Match the same three-dimensional shapes with same size and different orientation<br>• Match the same three-dimensional shapes with different size and different orientation<br>• Match the same three-dimensional shapes with same size and same orientation<br>• Match the same three-dimensional shapes with different size and same orientation<br>**Target:**<br>• Recognize spheres<br>• Recognize cones<br>• Recognize cubes<br>• Recognize cylinders<br>**Successor:**<br>• Use geometric shapes to describe objects<br>• Describe attributes of shapes |

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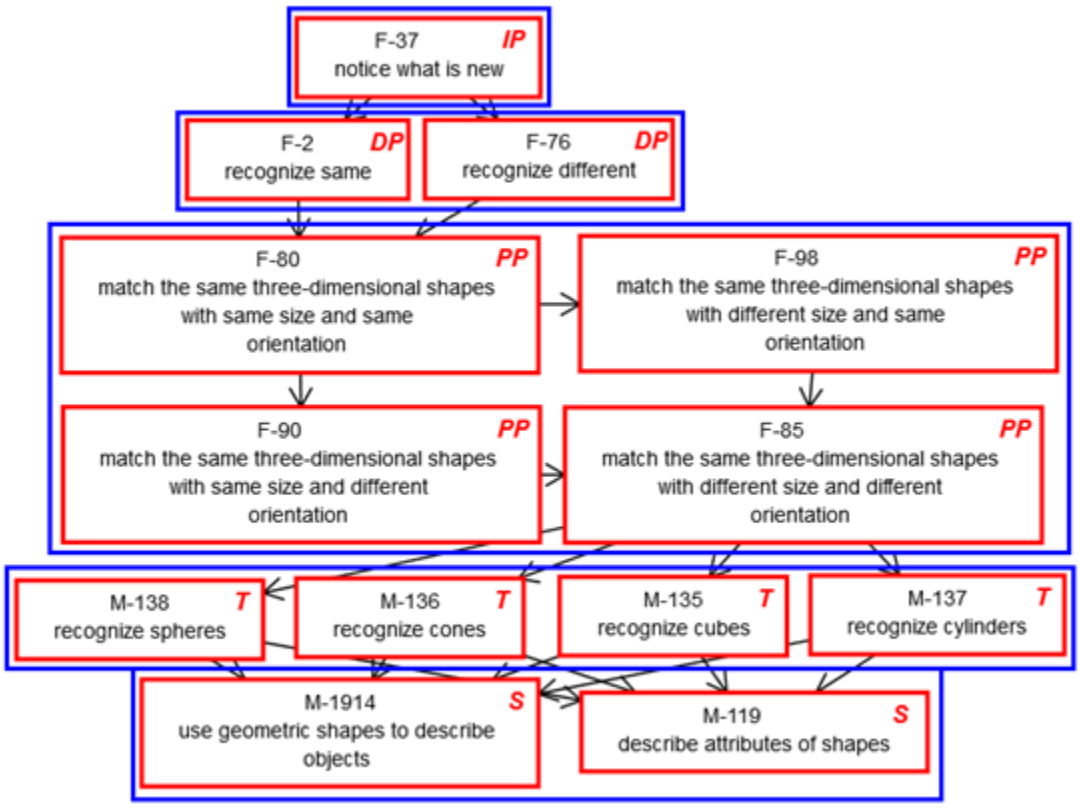
| T | Target | | |

**M.EE.5.MD.3** Identify common three-dimensional shapes



# ESSENTIAL ELEMENT, LINKAGE LEVELS, AND MINI-MAP
## MATH: GRADE 5
## M.EE.5.MD.4-5

| Grade-Level Standard | DLM Essential Element | Linkage Levels |
|---|---|---|
| **M.5.MD.4** Measure volumes by counting unit cubes, using cubic cm, cubic in., cubic ft., and improvised units; **M.5.MD.5** Relate volume to the operations of multiplication and addition, and solve real-world and mathematical problems involving volume | **M.EE.5.MD.4-5** Determine the volume of a rectangular prism by counting units of measure (unit cubes) | **Initial Precursor:**<br>• Recognize separateness<br>• Recognize enclosure<br>**Distal Precursor:**<br>• Explain volume<br>• Explain a unit cube<br>**Proximal Precursor:**<br>• Explain volume as a composition of cube units<br>• Calculate volume by counting unit cubes<br>**Target:**<br>• Calculate volume of a right rectangular prism by packing unit cubes<br>**Successor:**<br>• Solve word problems involving volume of rectangular prisms |



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| | | | |
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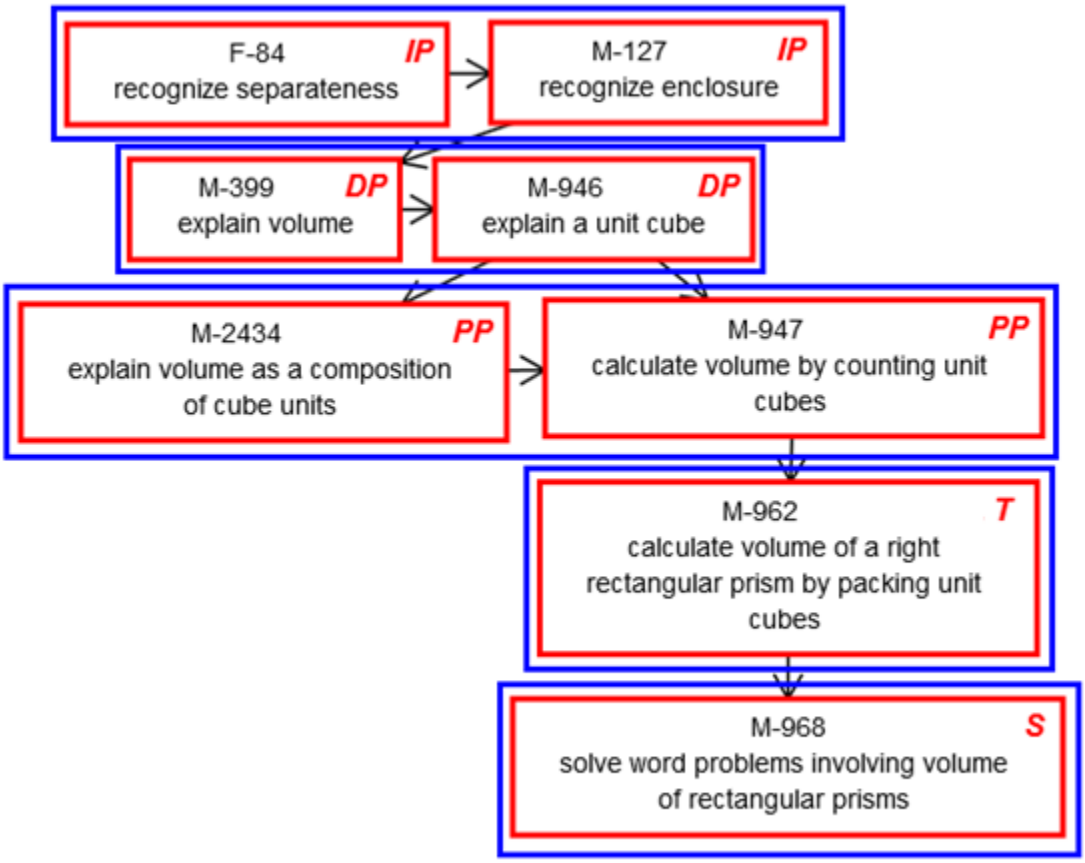
| PP | Proximal Precursor | UN | Untested |
| T | Target | | |

**M.EE.5.MD.4-5** Determine the volume of a rectangular prism by counting units of measure (unit cubes)



# ESSENTIAL ELEMENT, LINKAGE LEVELS, AND MINI-MAP
## MATH: GRADE 5
## M.EE.5.MD.1.A

| Grade-Level Standard | DLM Essential Element | Linkage Levels |
|---|---|---|
| **M.5.MD.1.** Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems | **M.EE.5.MD.1.a** Tell time using an analog or digital clock to the half or quarter hour | **Initial Precursor:**<br>• Attend<br>• Recognize different<br>**Distal Precursor:**<br>• Recognize measurable attributes<br>**Proximal Precursor:**<br>• Recognize the hour hand<br>• Knows hours on a clock<br>• Recognize the hour on a digital clock<br>• Recognize the minute hand<br>• Recognize the minute on a digital clock<br>**Target:**<br>• Tell time to the quarter hour<br>• Tell time to the half hour<br>**Successor:**<br>• Represent time |



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| | | | |
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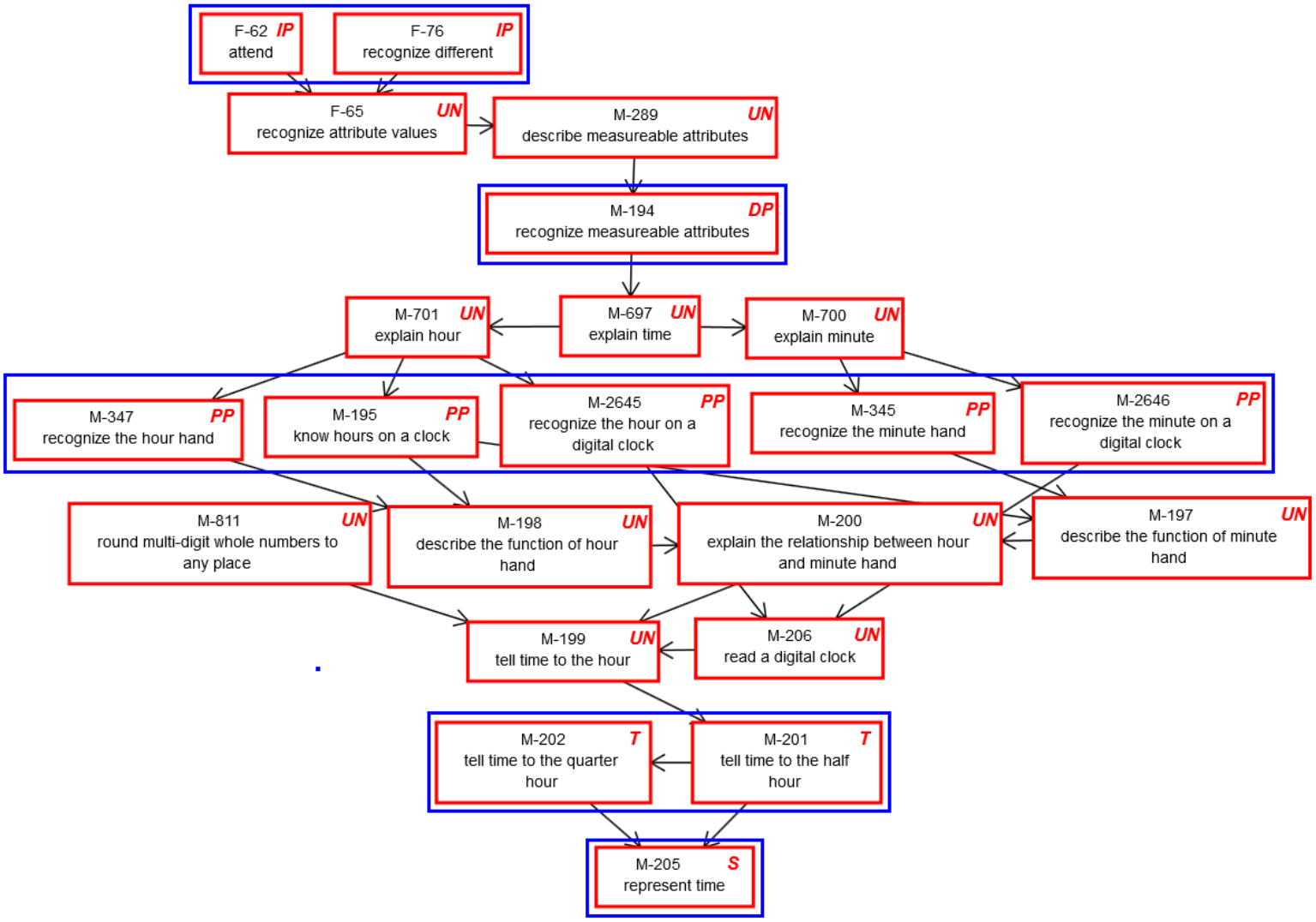
| PP | Proximal Precursor | UN | Untested |
| T | Target | | |

**M.EE.5.MD.1.a** Tell time using an analog or digital clock to the half or quarter hour



# ESSENTIAL ELEMENT, LINKAGE LEVELS, AND MINI-MAP
## MATH: GRADE 5
## M.EE.5.MD.1.B

| Grade-Level Standard | DLM Essential Element | Linkage Levels |
|---|---|---|
| **M.5.MD.1.b** Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems | **M.EE.5.MD.1.b** Use standard units to measure weight and length of objects | **Initial Precursor:**<br>• Recognize attribute values<br>**Distal Precursor:**<br>• Recognize measurable attributes<br>**Proximal Precursor:**<br>• Make direct comparison of 2 lengths<br>• Order more than 2 lengths by direct comparison<br>• Order more than 2 masses by direct comparison<br>• Make direct comparison of 2 masses<br>**Target:**<br>• Use an appropriate tool for measuring length using inches<br>• Use an appropriate tool for measuring length using feet<br>• Use an appropriate tool for measuring mass in pounds<br>• Use an appropriate tool for measuring mass in ounces<br>**Successor:**<br>• Estimate length using inches<br>• Estimate length using feet<br>• Estimate mass in pounds<br>• Estimate mass in ounces |

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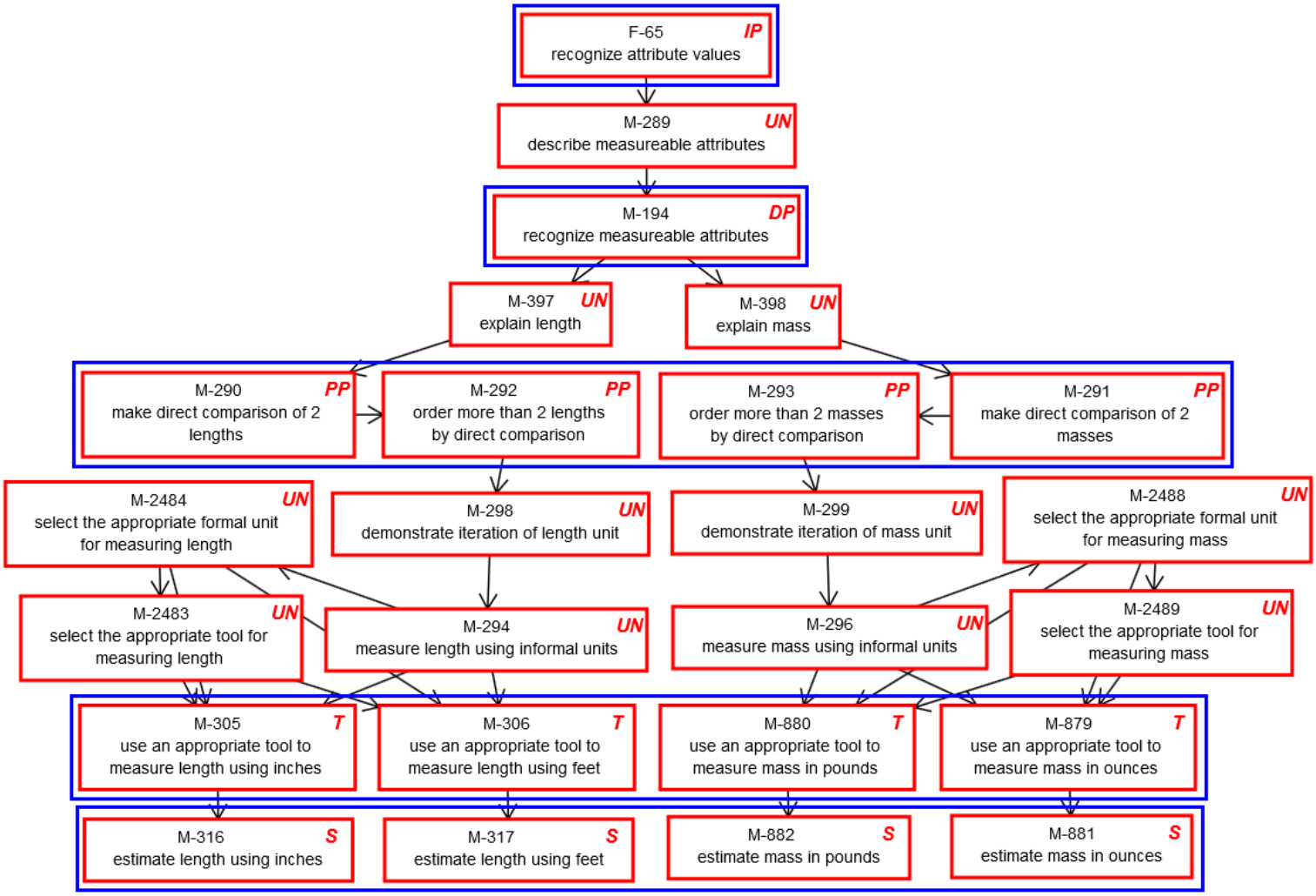
| PP | Proximal Precursor | UN | Untested |
| T | Target | | |

**M.EE.5.MD.1.b** Use standard units to measure weight and length of objects



# ESSENTIAL ELEMENT, LINKAGE LEVELS, AND MINI-MAP
## MATH: GRADE 5
## M.EE.5.MD.1.C

| Grade-Level Standard | DLM Essential Element | Linkage Levels |
|---|---|---|
| **M.5.MD.1.c** Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems | **M.EE.5.MD.1.c** Indicate relative value of collections of coins | **Initial Precursor:**<br>• Recognize attribute values<br>**Distal Precursor:**<br>• Recognize money<br>**Proximal Precursor:**<br>• State the value of a penny<br>• State the value of a nickel<br>• State the value of a dime<br>• State the value of a quarter<br>• Recognize penny<br>• Recognize nickel<br>• Recognize dime<br>• Recognize quarter<br>**Target:**<br>• State the value of a nickel related to a dime<br>• State the value of a nickel related to a quarter<br>• State the value of a penny related to a nickel<br>• State the value of a penny related to a dime<br>• State the value of a penny related to a quarter<br>**Successor:**<br>• Count with mixed coins |



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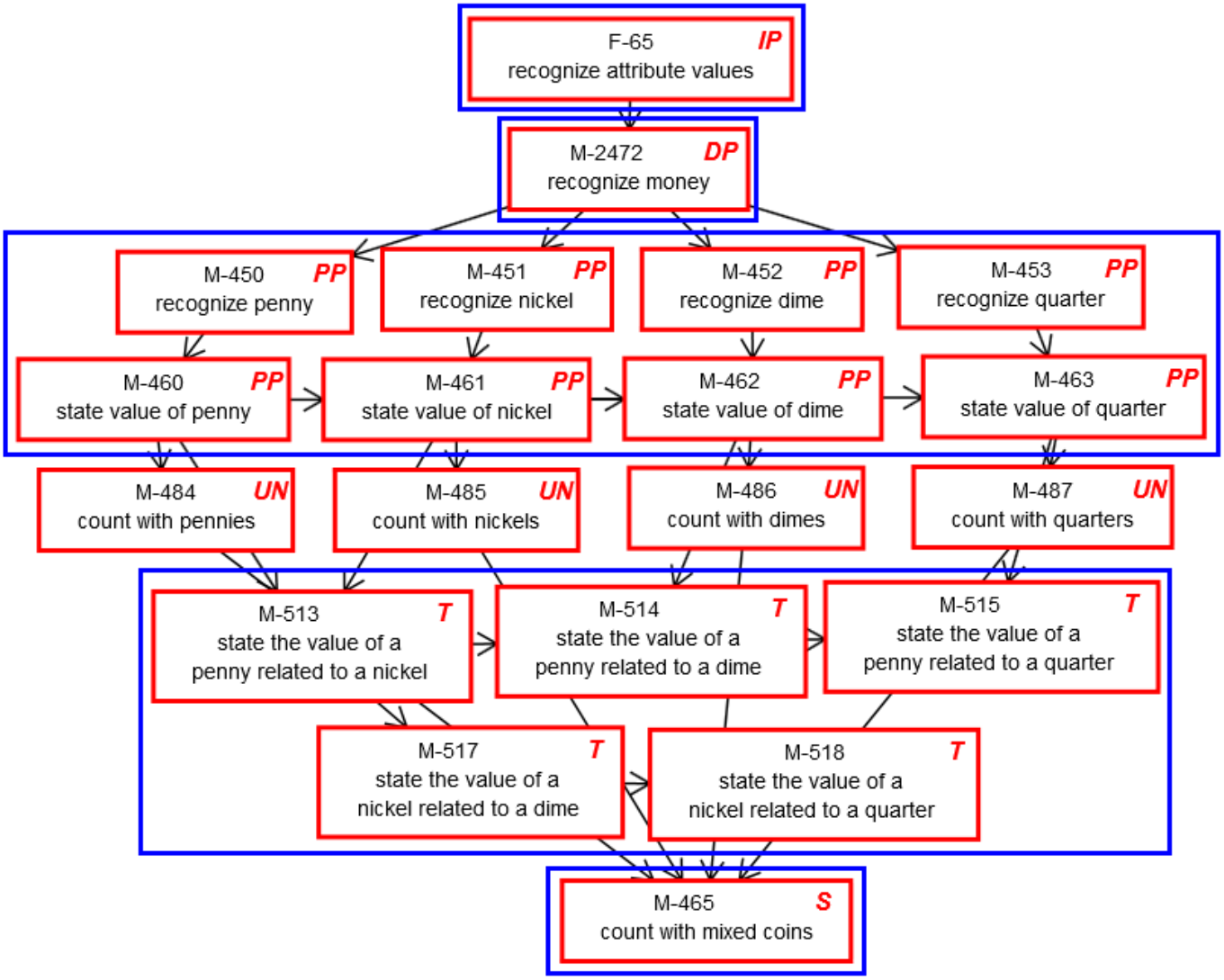
| T | Target | | |

**M.EE.5.MD.1.c** Indicate relative value of collections of coins



# ESSENTIAL ELEMENT, LINKAGE LEVELS, AND MINI-MAP
## MATH: GRADE 5
## M.EE.5.MD.2

| Grade-Level Standard | DLM Essential Element | Linkage Levels |
|---|---|---|
| **M.5.MD.2** Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally | **M.EE.5.MD.2** Represent and interpret data on a picture, line plot, or bar graph | **Initial Precursor:**<br>• Arrange objects in pairs<br>• Recognize attribute values<br>**Distal Precursor:**<br>• Classify<br>• Order objects<br>**Proximal Precursor:**<br>• Use bar graphs to read the data<br>• Use picture graphs to read the data<br>• Use line plots (dot plots) to read the data<br>**Target:**<br>• Represent data using bar graph<br>• Represent data using picture graph<br>• Represent data using line plot (dot plot)<br>• Use graphs to read between the data<br>**Successor:**<br>• Use graphs to read beyond the data |

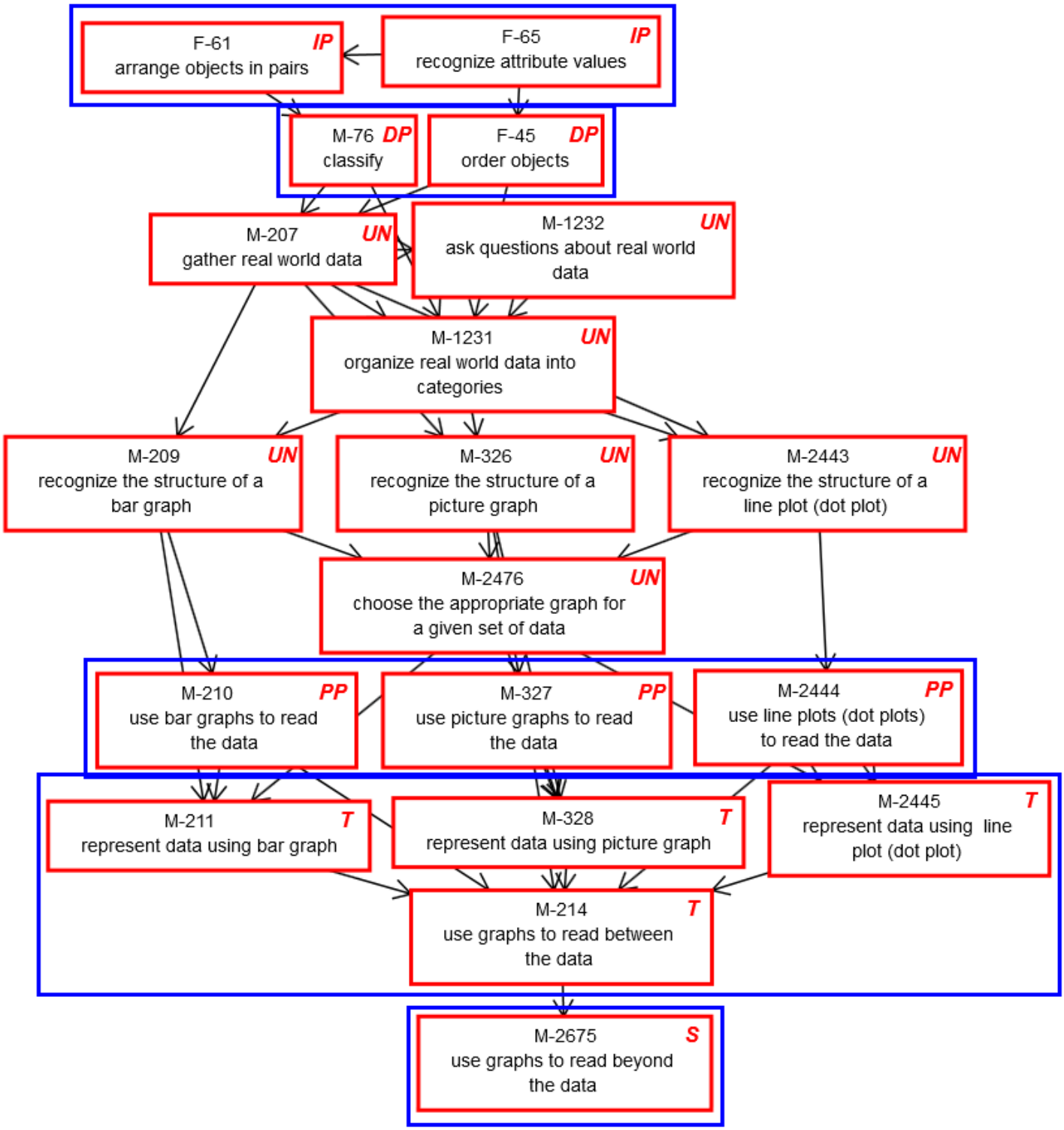


A diagram showing the relationship of nodes in the mini-map appears below.

*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.5.MD.2** Represent and interpret data on a picture, line plot, or bar graph



# ESSENTIAL ELEMENT, LINKAGE LEVELS, AND MINI-MAP
## MATH: GRADE 5
## M.EE.5.OA.3

| Grade-Level Standard | DLM Essential Element | Linkage Levels |
|---|---|---|
| **M.5.OA.3** Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane | **M.EE.5.OA.3** Identify and extend numerical patterns | **Initial Precursor:**<br>• Order objects<br>• Classify<br>• Contrast objects<br>**Distal Precursor:**<br>• Recognize patterns<br>**Proximal Precursor:**<br>• Recognize repeating patterns<br>• Recognize the core unit in a repeated pattern<br>• Recognize the pattern rule in a growing pattern<br>• Recognize growing patterns<br>• Recognize symbolic patterns<br>• Recognize shrinking patterns<br>• Recognize the pattern rule in a shrinking pattern<br>**Target:**<br>• Extend a symbolic pattern by applying the rule<br>**Successor:**<br>• Predict an element in a symbolic pattern by applying the rule |

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.5.OA.3** Identify and extend numerical patterns