

Mini-Map for M.EE.5.MD.2

Subject: Mathematics

Measurement and Data (MD)

Grade: 5

Learning Outcome

DLM Essential Element	Grade-Level Standard
M.EE.5.MD.2 Represent and interpret data on a picture graph, line plot, or bar graph.	M.5.MD.2 Make a line plot to display a data set of measurements in fractions of a unit ($\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$). Use operations on fractions for this grade to solve problems involving information presented in line plots.

Linkage Level Descriptions

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
Form a pair by putting together two different objects (e.g., a toy truck and a toy car). Recognize attribute values of an object (e.g., a square has four sides).	Group together objects by attribute values such as shape or size (e.g., group together a square, a rectangle, and a rhombus, as they all have four sides). Order objects by following a specific rule (e.g., arrange three objects with different sizes from the smallest to largest).	Use bar, picture, or line graphs to answer explicit questions for which the obvious answer is on the graph (e.g., on a bar graph representing favorite ice cream of students in a class, identify and communicate the number of students who like chocolate-flavor ice cream).	Represent data using bar graphs, picture graphs, and line plots. Interpret or integrate information on these types of graphs to answer questions (e.g., on the bar graph representing students' favorite ice cream, how many more students like strawberry than chocolate ice cream?).	Draw inferences or make predictions by interpreting information presented on a bar graph, picture graph, or line plot (e.g., on the bar graph representing the number of pizzas required for a certain number of people, predict the number of pizzas needed for 20 people).

Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

How is the Initial Precursor related to the Target?

In order to be able to understand data on a graph, students begin learning to notice what is new. The educator draws the students' attention to new objects or stimuli, labels them (e.g., “these are two red cubes and two blue cubes”, “you have two fidgets; one is big and one is small but they are both fidgets”), and the student observes, feels, or otherwise interacts with it. Educators encourage students to begin placing like objects together, drawing attention to the characteristics that make an item the same or different.

How is the Distal Precursor related to the Target?

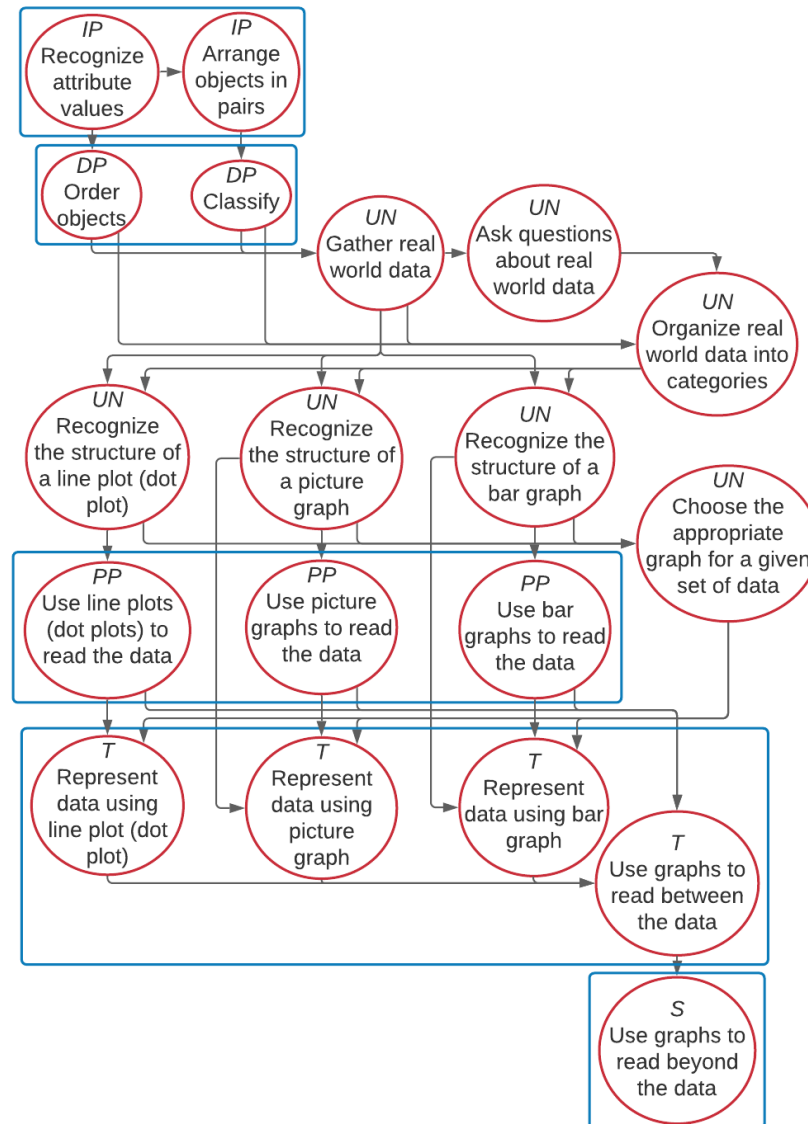
As the students’ attention to objects increases, educators will begin to draw the students' attention to what is the same and different between familiar items: color, shape, quantity (1-4), size, texture, and pattern. Educators should take care to use attribute words while defining and demonstrating their meaning. While students do not need to say these words, they do need to learn the meanings. Students will also begin to group two or more items in the same set based on an attribute (e.g., two tigers, bumpy balls and bumpy gravel, red spoons). As the students group two or more items, the educator will demonstrate the representation in a bar or picture graph and encourage students to actively participate in the creation of the graph.

Instructional Resources

Released Testlets
See the Guide to Practice Activities and Released Testlets .
Using Untested (UN) Nodes
See the document Using Mini-Maps to Plan Instruction .

[Link to Text-Only Map](#)

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



Map Key	
IP	Initial Precursor
DP	Distal Precursor
PP	Proximal Precursor
T	Target
S	Successor
UN	Untested
Boxes indicate tested nodes	