



Mini-Map for M.EE.HS.S.ID.4

Subject: Mathematics

Statistics and Probability—Interpreting Categorical and Quantitative Data (S.ID)

Grade: 10

Learning Outcome

DLM Essential Element	Grade-Level Standard
M.EE.HS.S.ID.4 Calculate the mean of a given data set (limit the number of data points to fewer than five).	M.S.ID.4 Use the mean and standard deviation of a data set to fit it to a normal distribution and to estimate population percentages. Recognize that there are data sets for which such a procedure is not appropriate. Use calculators, spreadsheets, and tables to estimate areas under the normal curve.

Linkage Level Descriptions

Initial Precursor	Distal Precursor	Proximal Precursor	Target	Successor
Recognize attributes or characteristics of an object, such as color, orientation, length, width, and weight.	Group objects by some attribute value (e.g., shape, size, texture, numerical pattern).	Communicate the number of observations for a given set of data [e.g., the number of observations in a data set {2, 5, 8, 10, 15, 4, 8} is 7].	Calculate mean by dividing the sum of all data by the number of observations.	Summarize data by calculating the mode or median [e.g., the mode for the data set {1, 2, 5, 6, 2, 3, 4, 2, 2} is 2].

Initial Precursor and Distal Precursor Linkage Level Relationships to the Target

How is the Initial Precursor related to the Target?

In order to calculate the mean of a data set, students begin by learning to notice what is new. The educator draws the students' attention to new objects or stimuli, labels them (e.g., "this is a circle since it does not have any sides", "two fidgets are big and two fidgets are small"), and the student observes, feels, or otherwise interacts with the shapes. Students also work on counting small units, recognizing that two or more sets or groups of items exist. Work on this skill using a variety of sets. Help students recognize when items are grouped together into a set or separated out. As educators present a set, label it (e.g., two balls, one bear, three blocks), count the items, label it again, and encourage students to use numbers to label and count the separate sets.

How is the Distal Precursor related to the Target?

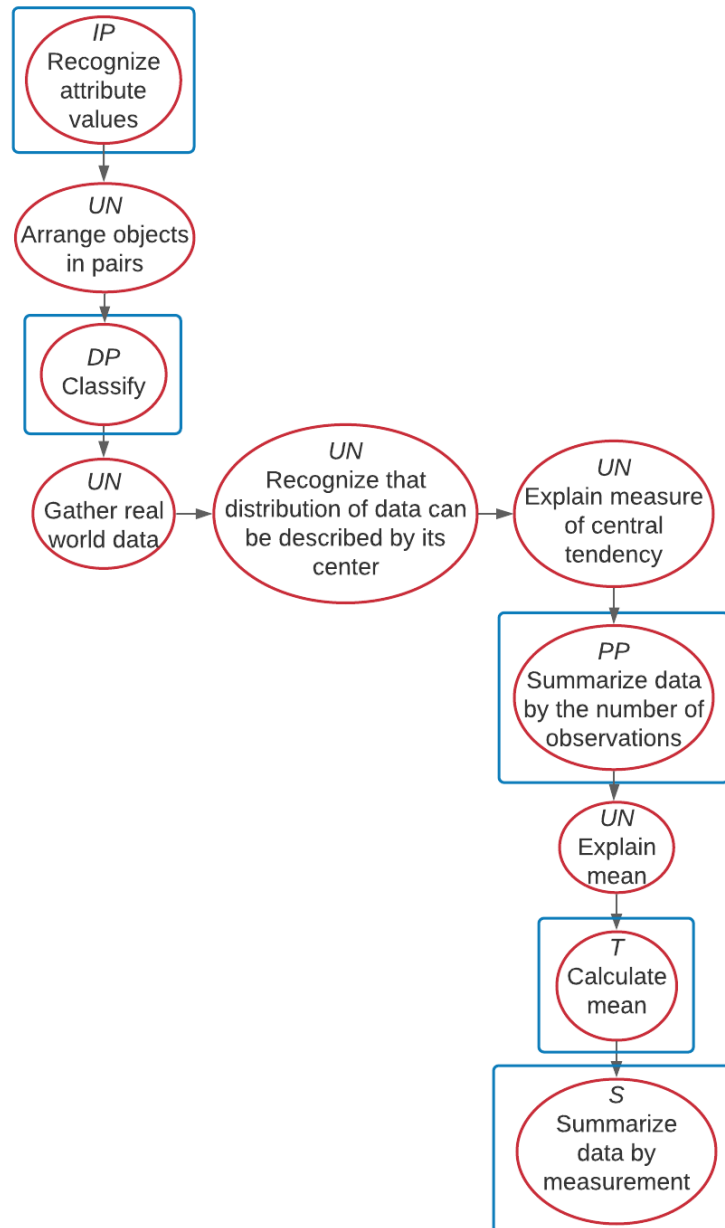
As students develop their ability to attend to the details of an object and to count objects, educators provide many opportunities for students to classify (group) items based on their size (e.g., compare two or more items and determine which is larger or smaller), amount (e.g., numbers larger or smaller than a given number), and distance between numbers (e.g., skip counting by 2, 5, or 10). Educators should also take care to use attribute words when defining and demonstrating grouping items. While students do not need to say these words, they do need to learn the meanings.

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.HS.S.ID.4 Calculate the mean of a given data set (limit the number of data points to fewer than five).



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