

8th Grade Module 6 – Linear Functions

	4 - Mastery	3 - Proficient	2 - Basic	1 - Below Basic	0 - No Evidence
Topic A (8.F.4, 8.F.5)	<p>Meets all of the criteria in a Level 3</p> <p>Completes tasks including synthesis and evaluation</p>	<p>Sketch a graph from a verbal description</p> <p>Identify when a function is increasing or decreasing and if it is linear or non-linear</p> <p>Construct a function and interpret the rate of change and initial value in terms of the situation for a given situation (verbal descriptions, tables or graphs)</p>	<p>Sketch a graph from a verbal description</p> <p>Identify when a function is increasing or decreasing and if it is linear or non-linear</p> <p>Determine the rate of change and initial value of a relationship to construct a function for a given situation (verbal descriptions, tables or graphs)</p>	<p>Can do 2 of the 3:</p> <p>Sketch a graph from a verbal description and identify if a function is linear or non-linear</p> <p>Identify when a function is increasing or decreasing</p> <p>Determine the rate of change and initial value of a relationship to construct a function for a given situation (verbal descriptions, tables or graphs)</p>	<p>Shows no evidence of proficiency</p> <p>Little evidence of reasoning or application to solve the problem.</p>
Topic B and C (8.SP.1, 8.SP.2, 8.SP.3)	<p>Meets all of the criteria in a Level 3</p> <p>Completes tasks including synthesis and evaluation</p>	<p>Construct a scatter plot and interpret all of the following in context of the situation:</p> <ul style="list-style-type: none"> • Clustering • Outliers • Positive or negative association • Linear or non-linear association <p>Fit a straight line in a scatterplot with a linear association and use to it do all of the following:</p> <ul style="list-style-type: none"> • write an equation of the line • interpret the slope and intercept of the line in context of the situation • justify the accuracy of the line in terms of data points • solve problems in context of the data 	<p>Construct a scatter plot and interpret 3 of the following:</p> <ul style="list-style-type: none"> • Clustering • Outliers • Positive or negative association • Linear or non-linear association <p>Fit a straight line in a scatterplot with a linear association and use to it do 3 of the following:</p> <ul style="list-style-type: none"> • write an equation of the line • interpret the slope and intercept of the line in context of the situation • justify the accuracy of the line in terms of data points • solve problems in context of the data 	<p>Construct a scatter plot and identify 3 of the following:</p> <ul style="list-style-type: none"> • Clustering • Outliers • Positive or negative association • Linear or non-linear association <p>Fit a straight line in a scatterplot with a linear association and use to it do 2 of the following:</p> <ul style="list-style-type: none"> • write an equation of the line • interpret the slope and intercept of the line in context of the situation • justify the accuracy of the line in terms of data points • solve problems in context of the data 	<p>Shows no evidence of proficiency</p> <p>Little evidence of reasoning or application to solve the problem.</p>
Topic D (8.SP.4)	<p>Meets all of the criteria in a Level 3</p> <p>Completes tasks including synthesis and evaluation</p>	<p>Construct and summarize data in two-way frequency tables, and use it to describe associations</p>	<p>Construct and summarize data in two-way frequency tables</p>	<p>Construct and identify values in a two-way frequency table</p>	<p>Shows no evidence of proficiency</p> <p>Little evidence of reasoning or application to solve the problem.</p>

8.F.B.4 - Construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a description of a relationship or from two (x, y) values, including reading these from a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graph or a table of values.

8.F.B.5 - Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.

8.SP.A.1 - Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.

8.SP.A.2 - Know that straight lines are widely used to model relationships between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.

8.SP.A.3 - Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept.

8.SP.A.4 - Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or columns to describe possible association between the two variables.