

Appendix I: Implementing Teaching Standards

This unit incorporates North Carolina Common Core Standards for 8th grade. It covers three standards within the statistics and probability content. The main focus is to investigate patterns of association in bivariate data.

CCSS.MATH.CONTENT.8.SP.A.1

Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities.

Students should be able to describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.

CCSS.MATH.CONTENT.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.

Students should see that scatter plots help to answer questions about the relationship between two items; is there a cause and effect? Does one seem to help predict the other? Is there a relationship between temperature and number of eggs?

CCSS.MATH.CONTENT.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.

Students should be able to draw the line of best fit, make judgment about the data, and predict future results.

CCSS.MATH.CONTENT.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. For example, collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?

Students should be familiar with a variety of ways to display and interpret data. When given a set of data, they should be comfortable picking the display that best represents that data or that suits the purpose for answering the questions for which the data was collected. Giving students opportunities to pose questions and collect their own data helps make the choice of data display selection seem more relevant and clarifies the purpose of each choice