

Appendix 1—Implementing Teaching Standards

Mathematical Requirements for IB Biology:

Carry out calculations involving means, decimals, fractions, percentages and ratios.—this is covered in all of the activities.

Represent and interpret frequency data in the form of bar charts, graphs, and histograms—students will deal with frequencies when using chi-square.

Plot graphs (with suitable scales and axes) involving two variables that show linear or non-linear relationships—students are plotting graphs for all of these activities.

Plot and interpret scatter graphs to identify a correlation between two variables, and appreciate that the existence of a correlation does not establish a causal relationship—students will do this when doing the correlation and linear regression activity.

Determine the mode and median of a set of data, calculate and analyze standard deviation—Students are calculating standard deviation for all of the activities.

Select statistical tests appropriate for the analysis of particular data and interpret the results—Students have to select which of the statistical tests are appropriate to use for the final assessment research report.³⁷