

# Data Management and Probability

|                           | Proposed Kindergarten                                    | Grade 1  | Grade 2  | Grade 3   | Grade 4  | Grade 5   | Grade 6  | Grade 7   | Grade 8  |
|---------------------------|--|--|--|---|--|---|--|---|--|
| Collect and Organize Data | sort, classify and display a variety of concrete objects | collect, organize, and display objects and data using pictures and concrete graphs | collect, organize, and display data using pictures, concrete objects, and simple labelled pictographs and bar graphs | collect, organize and display data using tally charts, detailed pictographs, and bar graphs | collect, organize and display data using tally charts, tables and horizontal and vertical bar graphs | collect, organize and display data using tally charts, tables, line plots and double bar graphs | collect, organize and display primary data using tally charts, line graphs, bar graphs and scatter plots | collect, organize and display primary and secondary data using a variety of representations that include frequency tables, stem and leaf plots and comparative bar graphs | collect, organize and display primary and secondary data using histograms, line graphs and circle graphs |
| Understanding Data        | justify a classification of concrete objects             | investigate and discuss data from concrete graphs using comparative language       | interpret data from simple charts and graphs   | Interpret data from charts and graphs   | investigate, explain, and interpret data from tables, charts and graphs                              | interpret and analyse accuracy of data in tables, charts and graphs                             | interpret data and explain relationships between data representations                                    | analyse and evaluate arguments based on the analysis of data (e.g., bias, central tendency, distribution of data)   | analyse and evaluate arguments based on measures of central tendency                                     |
| Probability               | describe probability in daily situations                 | describe probability in daily situations   | investigate and describe simple probability situations using qualitative language                                    | describe probabilities derived from simple experiments using qualitative language           | compare predictions to actual results of simple probability experiments using quantitative language  | compare predicted to actual results of a variety of probability experiments                     | compare experimental and theoretical probabilities of independent events                                 | determine experimental and theoretical probability in multiple independent events   | use probability models to make predictions about authentic events  |