4. 3. 3. Data Handling Dimension (Key Stage 3)

Unit	Learning objectives	Suggested time ratio
Organization and Representation of data		
Introduction to Various Stages of Statistics	● recognize various stages involved in statistics ● use simple methods to collect data so as to analyze posed problems ● be aware of the existence of different types of data (discrete and continuous) ● understand the criteria of organizing data and discuss different ways of organizing the same set of data	5
Construction and Interpretation of Simple Diagrams and Graphs	● construct and interpret simple diagrams including stem-and-leaf diagrams, pie charts, histograms, scatter diagrams, broken line graphs ● construct and interpret simple frequency polygons and curves, cumulative frequency polygons and curves ● be able to differentiate between histograms and bar charts ● explore the construction of diagrams and graphs with various tools besides paper and pencil ● compare the presentations of the same set of data by using various graphs or the same type of graphs but with different scales ● choose appropriate diagrams/graphs to present a given set of data ● read data from given frequencies in graphs (including percentiles, quartiles, median) ● read frequencies from given data in diagrams and graphs ● use some common wordings such as 'most popular', 'most likely', 'equally likely' to describe trends from line graphs ● discuss the impressions from graphs presented in various sources ● identify sources of deception in misleading graphs and their accompanying statements ● recognize the dangers of misinterpreting statistical data	24

Note: The objectives with asterisk (**) are exemplars of **enrichment topics.**
  The underlined objectives are considered as **non-foundation** part of the syllabus.

Unit	Learning objectives	Suggested time ratio
Analysis and Interpretation of data		
Measures of Central Tendency	• find mean, median and mode from a given set of ungrouped data • find mean, median and modal class from a given set of grouped data • be aware that the mean found for grouped data is an estimation • compare 2 data sets with given mean, median and mode • construct data sets with a given mean, median and mode • discuss the relative merits of different measures of central tendency for a given situation • <u>explore and make conjectures on the effect of the central tendency of the data such as</u> <u>(i) removal of a certain item from the data;</u> <u>(ii) adding a common constant to the whole set of data;</u> <u>(iii) multiplying the whole set of data by a common constant;</u> <u>(iv) insertion of zero in the data set</u> • understand weighted mean and be aware of its use in various real-life situations such as Hang Seng Index, calculation of marks in a report etc. • discuss the misuse of averages in various daily life situations • recognize the dangers of misusing averages	19

Note: The objectives with asterisk (**) are exemplars of **enrichment topics**.

The <u>underlined</u> objectives are considered as **non-foundation** part of the syllabus.

Unit	Learning objectives	Suggested time ratio
Probability		
Simple Idea of Probability	- explore the meaning of probability through various activities - have an intuitive idea about the relation between probability and the relative frequency as found in statistics or simulation activities - investigate probability in real-life activities, including geometric probability - compare the empirical and theoretical probabilities - calculate the theoretical probability by listing the sample space and counting - recognize the meaning of expectation	12

Note: The objectives with asterisk (**) are exemplars of **enrichment topics**.

The <u>underlined</u> objectives are considered as **non-foundation** part of the syllabus.