

Subject: Science

Golden Concept: Collecting, Presenting and Interpreting data

Purpose: Students are expected to develop skills in collecting, presenting, and interpreting data. The curriculum emphasizes practical and analytical skills, utilizing various teaching methods such as experiments and data analysis exercises. Data skills in science should support student's numeracy skills. Teachers aim to engage students in scientific inquiry with the purpose of helping students come to their own conclusions based on evidence.

Assessment: Assessment of data handling skills may occur through various methods, including coursework, examinations, and practical assessments.

Formal written exams often include questions that require data handling skills, and the application of knowledge to explain data. These questions may assess the ability to analyse data, identify patterns/ trends in data.

As part of student's entry level qualification at Maplefields, students are expected to collect and analyse data in a piece of coursework for each scientific discipline. Students are also expected to choose a method to display their data. E.g. bar chart, pie chart or scatter graph.

In their OCR physics GCSE students will encounter data questions that may ask them to identify patterns or trends, draw conclusions or possibly suggest improvements.

Cross curricular:

Mathematics - Mathematics is a primary subject where data handling skills are extensively taught. Students learn to collect, organize, and represent data using various graphs and charts.

Geography - Geography involves the analysis and interpretation of spatial data, Students learn to read and create maps, graphs, and charts to represent geographical information. Data handling skills in geography may include analysing population demographics, climate patterns, and economic data.

ICT - ICT often includes the development of data handling skills through the use of spreadsheets, databases, and other software tools.

PE - In physical education, data handling skills can be applied to analyse fitness levels, performance data, and sports statistics. Students may use graphs and charts to track their progress and understand the impact of physical activity on health.

Key Stage 1 (Ages 5-7):

- Introduction to basic data concepts through simple observations.
- Use of charts and pictograms to record data from everyday experiences.

Key Stage 2 (Ages 7-11):

- Building on data handling skills with more complex representation methods.
- Emphasis on interpreting data, making comparisons, and drawing conclusions.

Key Stage 3 (Ages 11-14):

- Continued development of data handling skills with an introduction to advanced statistical concepts.
- Conducting sophisticated experiments and using statistical techniques for analysis.

Key Stage 4 (Ages 14-16):

- Reinforcement of data handling skills in the context of specific scientific investigations.
- Application of statistical methods to analyse experimental results.

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