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| Knowledge & Skills development | <ul style="list-style-type: none"> • Develop understanding of advanced graphical techniques including tangents and roots • Strengthen reasoning with angle rules in polygons and geometric proofs • Consolidate data-handling skills through varied chart types and statistical diagrams • Introduce vector representation and foundational vector arithmetic • Improve interpretation and extrapolation of data using graphical and numerical strategies |
| Assessment / Feedback Opportunities | <ul style="list-style-type: none"> • Weekly starters and mini-assessments to evaluate retention and fluency • Formative assessments in Weeks 3 and 6 with targeted therapy lessons • Peer feedback on graph work and vector problem-solving tasks • Summative assessment opportunities through cumulative data representation projects • Use of exemplar solutions and scaffolded mark schemes for self-evaluation |
| Key Vocabulary | <i>Interpolation, Extrapolation, Tangent, Gradient, Root, Cubic, Circle, Quadrilateral, Polygon, Alternate, Corresponding, Co-interior, Stem-and-leaf, Histogram, Vector, Magnitude, Direction, Frequency polygon</i> |
| Literacy/Reading opportunities | <ul style="list-style-type: none"> • Decoding multi-step graphical and statistical word problems • Structured writing tasks explaining geometric proofs and angle reasoning • Guided reading of worked vector and data problems to develop comprehension • Use of sentence starters to structure mathematical explanations • Class glossary building and paired discussion to reinforce new terminology |
| Cross Curricular Themes | <ul style="list-style-type: none"> • Science – Graphical analysis of data, vector applications in physics • Geography – Data presentation techniques, correlation and trend spotting • Art & D&T – Symmetry, scaling, and transformations in geometric contexts • Computing – Logical sequence and vector data in graphical modelling • Business – Use of charts and graphs in market data interpretation |
| Personal Development (Including British Values, RSE, Citizenship) | <ul style="list-style-type: none"> • Promoting independence and resilience through exploratory data tasks • Encouraging fair and reasoned debate during peer assessment and group work • Building confidence in applying logical thinking to unfamiliar problems • Developing respect for the reliability and ethics of data interpretation • Reinforcing the value of perseverance and attention to detail in analysis |
| Career Opportunities | <ul style="list-style-type: none"> • Relevant for careers in architecture, engineering, and surveying • Data handling and graph interpretation for business, finance, and actuarial science • Foundation for science and computing pathways through vector and statistical reasoning • Supports communication and analytical skills essential in education, research, and public service roles |