



Our curriculum is carefully sequenced to ensure cumulative knowledge and progression. Each unit builds on the last, with clear concepts that students must grasp to progress. We define end points to illustrate what mastery looks like by year-end.

Location of resources:	JOHN Maths Staff - Documents John Port Spencer Academy Share Point – Maths Staff – Schemes of Work – GCSE Statistics
Curriculum intent and rationale:	<i>Every student to be the best statistician they can be.</i> Our aim is that every student has the opportunity to reach their potential mathematically and to be equipped to apply their mathematical knowledge to other subject areas, future courses, careers and everyday life. We aim for students to acquire substantive knowledge and procedural fluency along with conceptual understanding and the ability to apply reasoning and problem-solving skills. Curriculum organisation: Students elect to take GCSE Statistics in KS4. Students receive 3 lessons each week
National Curriculum Links:	AQA Mathematics GCSE GCSE Statistics

What content needs to be covered? Key Knowledge and skills / misconceptions to address					
By the end of the year students will know:					
Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Students will learn key knowledge and skills about: - Types of data - Data handling cycle - Sampling methods Challenge: Pupils will be given opportunity to develop and apply key skills using real world examples. Misconceptions: - Difference between random and non-random sampling methods - Misunderstanding key terms/phrases in sampling descriptions	Students will learn key knowledge and skills about: - Sampling Methods - Drawing Statistical Diagrams - Interpreting Statistical Diagrams Challenge: Pupils will be given opportunity to develop and apply key skills using real world examples. Misconceptions: - Frequency vs Frequency density - Which type of diagrams can be used for which type of data (discrete vs continuous) - Comparing areas of sector for comparative pie charts and not the size of sector	Students will learn key knowledge and skills about: - Conducting an experiment - Measures of location (Averages) - Measures of spread (Range/IQR) Challenge: Pupils will be given opportunity to develop and apply key skills using real world examples. Misconceptions: - Survey vs Census - Dividing by total frequency not number of rows in calculating mean from grouped frequency - Confusing when to use $n/2$ or $(n+1)/2$ for median, LQ and UQ	Students will learn key knowledge and skills about: - Measures of Spread - Frequency Distributions - Project Challenge: Pupils will be given opportunity to develop and apply key skills using real world examples. Misconceptions: - Difference in types of range (IQR, PERCENTILE, DECILE) - Ranges being a measure of CONSISTENCY not an average - Shape/Key points of a normal distribution - Percentage of data within various distances of a mean - Comparing FD for a sample vs Population	Students will learn key knowledge and skills about: - Probability - Theoretical - Experimental - PTD's - Venn Diagrams Challenge: Pupils will be given opportunity to develop and apply key skills using real world examples. Misconceptions: - Assuming past events affect future outcomes in independent events. - Believing probabilities over 1 or below 0 are valid. - Confusing mutually exclusive and independent events. - Thinking “equally likely” means “equal frequency in small samples.”	Students will learn key knowledge and skills about: - Project 2 - Recap from Mock Students will recap, retrieve and build on key knowledge and skills from half term 4: Challenge: Pupils will be given opportunity to develop and apply key skills using real world examples. Misconceptions: - Understanding a mark scheme and how marks are allocated - How to present a project and communicate finding effectively



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Previous learning that is particularly relevant:		
Statistics and probability knowledge learnt in the KS3 curriculum	Statistics and probability knowledge learnt in the KS3 curriculum	Statistics and probability knowledge learnt in the KS3 curriculum
Future Learning – How content prepares students for future units, Key Stage 4, or Key Stage 5?		
prepares individuals for year 11 statistics and A–level maths, whilst providing additional practice for GCSE maths. Gives students an insight to statistical knowledge and techniques that may be used in other areas of the curriculum eg social sciences	prepares individuals for year 11 statistics and A–level maths, whilst providing additional practice for GCSE maths. Gives students an insight to statistical knowledge and techniques that may be used in other areas of the curriculum eg social sciences	prepares individuals for year 11 statistics and A–level maths, whilst providing additional practice for GCSE maths. Gives students an insight to statistical knowledge and techniques that may be used in other areas of the curriculum eg social sciences
Outcomes: By the end of the year pupils will be able to:		
- Identify Types of data, sampling methods and types of statistical diagrams, stating the advantages and disadvantages of each where appropriate - Calculate averages and measures of spread from lists, tables, charts. Comparing datasets where appropriate - Calculate and compare probabilities from table and diagrams		
Assessment Strategy: How we know our students are knowing and remembering more – Data from hunting not fishing, formative and summative assessment/s is used to adapt teaching and provide targeted challenge and intervention, supporting SEND and disadvantaged pupils.		
Formative: Retrieval starters Use of mini whiteboards in lesson: immediate assessment to enable adaption to lessons and intervention Highlighter plenaries followed by Highlighter Starters Questioning: methods of participation Termly tests used in a formative manner; followed by developmental work	Summative (& cumulative) 4 assessments throughout the year Mock at the end of the year	Opportunities to revisit past learning: Retrieval starters Interleaving built into SoW Homework Opportunities for homework (including apps): Paper homework on recently covered topics Revision for tests
How is the curriculum adapted to meet the needs of SEND and disadvantaged pupils, while maintaining high expectations?		
Expected prior knowledge is revisited. Scaffolding is given where appropriate. Information can be chunked where appropriate		
Wider Curriculum and Enrichment – cultural capital and real world application -		
Enriching experiences: Application of knowledge to project work	Literacy, Oracy and disciplinary language: The correct use and understanding of notation, key words and terms is essential for students to be able to understand explanations and questions and to be able to participate effectively, with confidence in discussion and written work. Key words and terms are explicit in the Scheme of Work Key words are emphasised in lessons and used in discussion.	Cross-Curricular opportunities / Opportunities to develop ‘character’: Statistical diagrams: Geography, Business Studies, Psychology Averages and Range: Social Sciences, Business Studies, Science, PE



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Our curriculum supports the school value of:		Lessons include opportunities to discuss in pairs before feeding back to the whole class.	Our curriculum supports personal development by:
Joy	Foster enthusiasm and engagement by Using manipulatives and a variety of representations to develop understanding. By creating challenge at a level where students can achieve success.		
Progress	We monitor and support progress through The use of assessment strategies during lessons that support adaptive teaching strategies. Analysis of homework. Analysis of half termly test data with feedback and development work.		
Success	We celebrate success by Giving verbal praise, achievement points and certificates		
Act with care, kindness, respect, and integrity	We build meaningful connections with our students by Ensuring a safe and supportive classroom environment with clear expectations of work and behaviour where there is mutual respect for all people in the room and all people feel valued.		

Curriculum impact is evaluated through pupil study, work scrutiny, and progress data. Findings inform regular curriculum review to ensure continuous improvement.

When was this curriculum last reviewed? Include date	What changes were made and why?	How is ongoing improvement ensured?
June 2025		QA climate walks Analysis of mock exams.