

Subject:	
<b>“Magic and Gift” of the subject</b>	<ul style="list-style-type: none"> <li>● Maths is everywhere! Statistics demonstrates some of the real life applications of mathematical skills, used in geography/business/social sciences and many other areas</li> <li>● Develops an ability to analyse and interpret information logically to draw conclusions</li> <li>● Gives you the skills to avoid being misled by data representation</li> </ul>
<b>Careers (salaries)</b>	<p>Croupier – Staffing the gaming tables in a casino - £14000 - £25000 dep on experience.</p> <p>Psychologist – uses probability in experiments/surveys etc and to interpret results from samples/populations £26000 to £31600.</p> <p>Marine Biologist – analysing data - £19000 - £24000 or with PhD or experience – up to £50000</p> <p>Advertising – Marketing director earns £20,000 to £98,000. Their role involves market research, buying habits of consumers and calculating profit.</p> <p>Biostatistician - look for patterns to forecast the probability of the occurrence of specific conditions or phenomena that may occur in the environment. Average salary £49,375 per year.</p> <p>Actuary - assesses risk for an insurance company. This information is used to develop policies for clients or management strategies for businesses. £40,000 - £60,000.</p>
<b>Notable high profile alumni (Park School and “famous”)</b>	<p>Florence Nightingale - Member of the Royal Statistical Society</p> <p>Ivan Pavlov - Psychologist</p> <p>Harold Wilson - British Prime Minister from 1964 to 1970 and 1974 to 1976</p> <p>Derek Wanless - Member of the Institute of Statisticians - Natwest Director of Personal Banking</p>
<b>Degrees and Best Universities (Global?)</b>	<p>Top 5 Universities in the UK for Statistics</p> <ol style="list-style-type: none"> <li>1. University of Cambridge</li> <li>2. University of Oxford</li> <li>3. Imperial College London</li> <li>4. University College London</li> <li>5. London School of Economics</li> </ol> <p>Top 5 Universities Worldwide for Statistics:</p> <ol style="list-style-type: none"> <li>1. Massachusetts Institute of Technology (MIT) - USA</li> <li>2. Stanford University - USA</li> <li>3. Harvard University - USA</li> <li>4. University of California Berkeley - USA</li> <li>5. University of Cambridge - England</li> </ol> <p>Top 5 Degrees that need Statistics:</p> <ol style="list-style-type: none"> <li>1. Mathematics</li> <li>2. Actuarial Science</li> <li>3. Psychology</li> <li>4. Economics</li> <li>5. Social Sciences</li> </ol>

<p><b>Post 16 Courses and Destinations</b></p>	<p><b>Post 16 courses and various destinations</b></p> <ul style="list-style-type: none"> <li>· A levels <ul style="list-style-type: none"> <li>○ Maths, Further Maths, Statistics</li> <li>○ Related subjects: Accounting, business studies, economics, computer science/ computing,</li> </ul> </li> <li>· Applied and job-related learning (BTECs/ NVQs/ SVQs/ Diplomas) <ul style="list-style-type: none"> <li>○ Business studies</li> <li>○ Computer science</li> <li>○ Accounting</li> </ul> </li> <li>· Apprenticeships <ul style="list-style-type: none"> <li>○ Business admin and law, e.g. accounting technician</li> </ul> </li> </ul> <p><b>REQUIRING GRADE 5 AND ABOVE FOR MATHS GCSE</b></p> <ul style="list-style-type: none"> <li>· Bideford College <ul style="list-style-type: none"> <li>○ A Levels <ul style="list-style-type: none"> <li>§ Further Mathematics</li> <li>§ Mathematics</li> </ul> </li> </ul> </li> <li>· Blundells <ul style="list-style-type: none"> <li>○ A Levels <ul style="list-style-type: none"> <li>§ Further Mathematics</li> <li>§ Mathematics</li> </ul> </li> </ul> </li> <li>· Petroc <ul style="list-style-type: none"> <li>○ A Levels <ul style="list-style-type: none"> <li>§ Mathematics</li> <li>§ Further Mathematics</li> </ul> </li> </ul> </li> <li>· Exeter college <ul style="list-style-type: none"> <li>○ A Levels <ul style="list-style-type: none"> <li>§ Mathematics</li> <li>§ Further Mathematics</li> </ul> </li> </ul> </li> </ul>
<p><b>GCSE Specification</b></p>	<p>Edexcel GCSE Statistics  Pearson Edexcel Level 1/Level 2 GCSE (9 - 1) in Statistics (1ST0)</p>

## Assessment Objectives and Percentages in Examination

Students must:		% in GCSE
<b>AO1</b>	Demonstrate knowledge and understanding, using appropriate terminology and notation, of standard statistical techniques used to: <ul style="list-style-type: none"> <li>collect and represent information</li> <li>calculate summary statistics and probabilities</li> </ul>	55
<b>AO2</b>	Interpret statistical information and results in context and reason statistically to draw conclusions  <i>Where questions/tasks targeting this Assessment Objective will also credit students for their ability to 'demonstrate knowledge and understanding of standard statistical techniques (AO1) and/or to 'assess the appropriateness of statistical methodologies and the conclusions drawn through the application of the statistical enquiry cycle' (AO3), an appropriate proportion of the marks for the question/task must be attributed to the corresponding Assessment Objective(s).</i>	25
<b>AO3</b>	Assess the appropriateness of statistical methodologies and the conclusions drawn through the application of the statistical enquiry cycle  <i>Where questions/tasks targeting this Assessment Objective will also credit students for their ability to 'demonstrate knowledge and understanding of standard statistical techniques' (AO1) and/or to 'interpret statistical information and results in context and reason statistically to draw conclusions' (AO2), an appropriate proportion of the marks for the question/task must be attributed to the corresponding Assessment Objective(s).</i>	20
<b>Total</b>		<b>100%</b>

### Breakdown of Assessment Objectives

Paper	Assessment Objectives			Total for all Assessment Objectives
	AO1 %	AO2 %	AO3 %	
Paper 1 (1F/1H)	27.5	12.5	10	50%
Paper 2 (2F/2H)	27.5	12.5	10	50%
<b>Total for GCSE</b>	<b>55% ±3</b>	<b>25% ±3</b>	<b>20% ±3</b>	<b>100%</b>

<b>Year by Year Intent</b>  (5 hours per fortnight)	<b>Cycle by Cycle Intent - Clear Areas of Knowledge (big topics), Skills and Assessment Objectives (linked to GCSE Spec), Cross Curricular Links and Opportunities (where is this topic/knowledge delivered elsewhere in the school (and is that department more "expert").</b>	<b>Where will this cycle be revisited/ where has it been taught before (interleaving)?</b>
<b>Year 11: Key intent of this year</b>	<b>Exams - What Final Exams/NEAs will they take (and key topic area if appropriate)</b>	<b>Edexcel - GCSE 9 - 1 Higher or Foundation. Two papers per qualification</b>
	<b>Cycle 5</b> <b>Probability distributions &amp; Quality assurance</b> Unit 17 - Probability Distributions Unit 18 - Quality Assurance  Assessment = 30 mins Pearson End of Unit Test	Prior knowledge from and GCSE Maths Higher Unit 17

	<p>8 60 minute Year 11 End of Year test 2 x End of course exams 90 mins each</p> <p><b>Cycle 4</b> <b>Time Series, Probability and Index Numbers</b> Unit 13 - Time Series and Quality Assurance Unit 14 - Simple Probability and Theoretical Probability Unit 15 - Probability from Diagrams Unit 16 - Index numbers and Rates of Change</p> <p>60 minute Year 11 Baseline Exam at the start of year Assessment = 30 mins Pearson End of Unit Test 5, 6, 7</p>	<p>Prior knowledge from Year 8 Unit 13,15 and 17 and and GCSE Maths Higher Unit 17 Covered again in GCSE Maths Higher Unit 28 Revisited in Cycle 5 Past Exam Paper <u>Co-teaching opportunity</u> - GCSE Maths: Probability, rates of change, time series graphs; GCSE Chemistry: Particle speed distributions</p>
<p><b>Year 10: Key intent of this year</b></p>	<p><b>Cycle 3</b> <b>Summarising Data</b> Unit 9 - Measures of Central Tendency Unit 10 - Measures of Dispersion Unit 11 - Box Plots, Calculating Skewness and representing outliers Unit 12 - Scatter Diagrams and Correlation</p> <p>Assessment = 30 mins Pearson End of Unit 3 60 minute End of Year Exam</p>	<p>Prior knowledge of some content from Year 7 Unit 9 and GCSE Maths Higher Unit 8 Covered again in GCSE Maths Higher Unit 28 Revisited in Cycle 4 Assessment and Cycle 5 Past Exam Paper <u>Co-teaching opportunity</u> - GCSE Maths: Averages, Scatter graphs, correlation, interpolate and extrapolate; GCSE Geography: Averages, dispersion graphs, scatter graphs; GCSE Biology: Averages for populations and ecosystems</p>
	<p><b>Cycle 2</b> <b>Data Processing and Representation. Scatter diagrams and correlation</b> Unit 6 - Tabulation Unit 7 - Representing Qualitative and Discrete Data Unit 8 - Representing Continuous Data</p> <p>Assessment = 30 mins Pearson End of Unit 2 Test and 30 mins Pearson End of Unit 4 Test</p>	<p>Prior knowledge of some content from Year 7 Unit 9 and GCSE Maths Higher Unit 8 Covered again in GCSE Maths Higher Unit 28 Revisited in Cycle 3 Past Exam Paper, Cycle 4 Assessment and Cycle 5 Past Exam Paper <u>Co-teaching opportunity</u> - GCSE Maths: interpret and construct tables, charts and diagrams, construct and interpret discrete and continuous data ie histograms and cumulative frequency graphs; GCSE Sciences: Bar Charts; GCSE PE: Analysing Graphs; GCSE Geography: Choropleth maps, Population Pyramids</p>
	<p><b>Cycle 1</b> <b>Collection of Data</b> Unit 1 - Planning Unit 2 - Types of Data Unit 3 - Population and Sampling Unit 4 - Sampling Methods Unit 5 - Collecting Data</p> <p>60 minutes Year 10 Baseline Test at start of Year Assessment = 30 mins Pearson End of Unit 1 Test</p>	<p>Prior knowledge of some content from Year 7 Unit 9 and GCSE Maths Higher Unit 8 Revisited in Cycle 2 Assessment, Cycle 3 Past Exam Paper, Cycle 4 Assessment and Cycle 5 Past Exam Paper <u>Co-teaching opportunity</u> - GCSE PE: Quantitative and Qualitative Data; GCSE History: Sample Sizes; GCSE Geography: Sampling Methods; GCSE Maths: infer properties of populations or distributions from samples whilst knowing limitations of sampling</p>
<p>Year 9: Key</p>	<p>Cycle 9</p>	<p>NA</p>

intent of this year	Cycle 8	NA
	Cycle 7	NA
Year 8: Key intent of this year	Cycle 6	NA
	Cycle 5	NA
	Cycle 4	NA
Year 7: Key intent of this year	Cycle 3	NA
	Cycle 2	NA
	Cycle 1	NA