

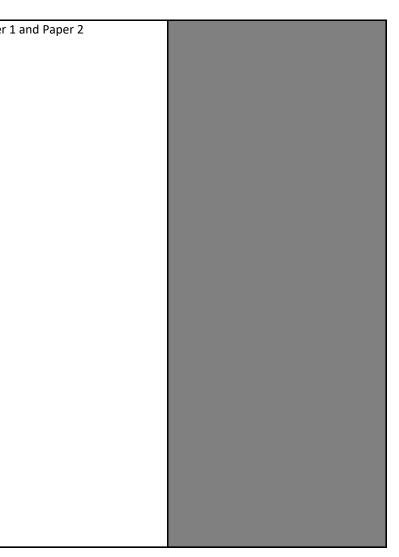
Richard Lander School

Statistics Curriculum Overview - 10/11

	Autumn 1		Autumn 2	Autumn 2		Spring 1		Spring 2		Summer 1	Summer 2	
Reporting Y10		CfCs	BfL & Grades			CfCs		BfL & Grades			BfL & Report	
Year 10					 The collection of 1(a) Planning Hypotheses Designing investigation investigation of the set of the set	ations with potenti ative, qualita discrete, co d, bivariate a nplications c ata y data isadvantage sampling e frame and unity (conve ists to make tion charact o predict po size has an ation pture recapt	ative, ntinuous, and of s sample enience) eristics pulation impact on ture	natural), simula observation, re- and sampling o Reliability and o Collecting ser o Random resp • Questionnaire o Leading quest sources, time fa questions, diffe- technique • Problems with o Missing data, data • Controlling ex o Control group representing ar ASSESSMENT 2(a) Representi • Population py • Choropleth m • Comparative • Interpret and represented pic • Cumulative fr grouped) charts	data (laboratory, field and ation, questionnaires, ference, census, population d validity nsitive content matter onse es and interviews tions, avoiding biased actors, open/closed erent types of interview h collected data non-response, 'cleaning' ktraneous variables os2. Processing, nd analysing data ing data yramid hap pie chart compare data sets ctorially equency (discrete and	2(a) Representing data Histograms unequal class widths Frequency density Interpret and compare data sets displayed in histograms 2(a) Representing data Justify appropriate form to represent data Graphical misrepresentation Determine skewness by inspection Interpreting a distribution of data with reference to skewness Calculating skewness Comparing data sets represented in different formats 	2(b) Measures of central tendency • Averages from raw or grouped data o Mean, median, mode • Weighted mean • Geometric mean • Justify appropriate average to use in context 2(c) Measures of dispersion • Range, quartiles, interquartile range (IQR), percentiles • Interpercentile range, interdecile range • Standard deviation • Identifying outliers by inspection • Identifying outliers by calculation • Comment on outliers in context • Compare data sets using appropriate measure of central tendency and measure of dispersion ASSESSMENT	Work Experience Week
Reporting Y11		CfCs & Grades	Rep &	Grades		CfCs & Grades			BfL & Grades			

BE THE	BEST	-
	YOU	CAN BE

	2(e) Scatter diagrams and correlation	2(f) Time series	'3. Experimental and theoretical	3. Probability distributions	Revision for Paper 1
	• Explanatory (independent) variables	Moving averages	probability	Binomial distribution	
	and response (dependent) variables	Identifying trends	Independent events	o Notation B(n, p)	
	Correlation	• Interpreting seasonal and cyclical trends in	Conditional probability	o Conditions that make binomial model	
	o Positive, negative, zero, weak, strong	context	Difference in terms of bias	suitable	
	o Distinction between correlation and	Mean seasonal variation	2. Processing, representing and analysing	o Mean (np)	
	causation	o Predictions using average seasonal effect	data	o Calculation of binomial probabilities	
	• Line of best fit	3. Probability	2(d) Further summary statistics	 Normal distribution 	
	o Using the regression equation y= a+	3. Experimental and theoretical probability	 Index numbers / weighted index 	ο Notation N(μ , σ2)	
	bx	• Likelihood	numbers	o Characteristics of Normal distribution	
	 Calculate Spearman's rank correlation 	 Expected frequency of a specified 	o Retail price index (RPI)	o Conditions that make Normal model	
	coefficient	characteristic within a sample or population	o Consumer price index (CPI)	suitable	
	 Interpret Spearman's rank in context 	 Use collected data and calculated 	o Gross domestic product (GDP)	o Approximately 95% of the data lie within	
	 Interpret Pearson's product moment 	probabilities to determine and interpret risk	 Interpret data related to rates of 	two standard deviations of the mean and	
	correlation coefficient (PMCC) in	 Compare experimental data with 	change over time when given in graphical	that 68% (just over two thirds) lie within	
Year 11	context	theoretical predictions	form	one standard deviation of the mean	
	 Understand the distinction between 	 Understand that increasing sample size 	• Calculate and interpret rates of change	2(c) Measures of dispersion	
	Spearman's rank correlation coefficient	generally leads to better estimates of	over time from tables using context	 Standardised scores 	
	and Pearson's product moment	probability and population parameters	specific formula	2(g) Quality assurance	
	correlation coefficient (PMCC)	 Use two-way tables, sample space 		 Know that a set of sample means are 	
		diagrams, tree diagrams and Venn diagrams		more closely distributed than individual	
		to represent all the different outcomes		values from the same population.	
		possible for at most three events		Control charts	
		ASSESSMENT		o Use action and warning lines in quality	
				assurance sampling applications.	
				ASSESSMENT	



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