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| Name: |  | | | |  | |
| Baldivis logo cropped | **Mathematics Applications Unit 2 Year 11**  **Investigation 2, 2020**  **Topic – Univariate Data** | | | |  | |
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| **Date out:** | | *Week \_\_\_\_ Date \_\_\_\_\_\_\_\_* | **Date Due:** | *Week \_\_\_\_Date \_\_\_\_\_\_\_\_\_\_* | |
| **Weighting:** | | *10%* |

**2 lessons in class**

**Due at 5:00pm 3 weeks after handed out.**

Investigate living in The Middle East, South America and South East Asia. Compare data from [https://www.gapminder.org/data/](about:blank) and apply your knowledge of univariate data analysis to illustrate your response.

Produce a report with a maximum length of 3 pages including any diagrams, submitted electronically via Connect.

**This Investigation covers your knowledge and skills in the area of:**

**Topic 2.1: Univariate data analysis and the statistical investigation process**

**The statistical investigation process**

2.1.1 review the statistical investigation process; identifying a problem and posing a statistical question, collecting or obtaining data, analysing the data, interpreting and communicating the results

**Making sense of data relating to a single statistical variable**

2.1.2 classify a categorical variable as ordinal, such as income level (high, medium, low) or nominal, such as place of birth (Australia, overseas) and use tables and bar charts to organise and display data

2.1.3 classify a numerical variable as discrete, such as the number of rooms in a house, or continuous, such as the temperature in degrees Celsius

2.1.4 with the aid of an appropriate graphical display (chosen from dot plot, stem plot, bar chart or histogram), describe the distribution of a numerical data set in terms of modality (uni or multimodal), shape (symmetric versus positively or negatively skewed), location and spread and outliers, and interpret this information in the context of the data

2.1.5 determine the mean and standard deviation of a data set using technology and use these statistics as measures of location and spread of a data distribution, being aware of their limitations

**Comparing data for a numerical variable across two or more groups**

2.1.10 construct and use parallel box plots (including the use of the ‘Q1 – 1.5 x IQR’ and ‘Q3 + 1.5 x IQR’ criteria for identifying possible outliers) to compare groups in terms of location (median), spread (IQR and range) and outliers, and interpret and communicate the differences observed in the context of the data

2.1.11 compare groups on a single numerical variable using medians, means, IQRs, ranges or standard deviations, and as appropriate; interpret the differences observed in the context of the data and report the findings in a systematic and concise manner

2.1.12 implement the statistical investigation process to answer questions that involve comparing the data for a numerical variable across two or more groups; for example, are Year 11 students the fittest in the school?

**SCSA grade descriptors**





