MRS. GAWLIK/MRS. CACHIA November 17-21, 2014

**Monday, November 17, 2014**

**(Technology)**

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| * TARGET STATEMENT * I can use technology as a tool to assist me with math concepts. |

**Tuesday, November 18, 2014**

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| Guest Teacher |

**Wednesday, November 19, 2014**

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| Guest Teacher |

**Thursday, November 20, 2014**

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| **Content Standard:**  **Understand the connections between proportional relationships, lines, and linear equations.**   * 8.SP.A.1 Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association. | **ELP Standard:**  English language learners communicate information, ideas and concepts necessary for academic success in the content area of Mathematics.   * Explicit instruction of bivariate data vocabulary using tactile and virtual tools (ex: software tools, example of scatter plots). * Real world examples to reinforce bivariate data vocabulary (positive, negative, and no relationship graphs). |
| **Content Objective:**  I can demonstrate comprehension of the spread of univariate distribution by calculating the standard deviation. | **Language Objective:**  I can write to draw conclusions of standard deviation using mathematical models and a calculator. |
| * TARGET STATEMENT:   **I CAN** calculate the standard deviation of data using mathematical models and a calculator. | |
| **Key Vocabulary:**  Independent and Dependent variable, linear relationship, nonlinear relationship, x-axis, y-axis, variables, function, mathematical model, residual, slope, additive inverse, multiplicative inverse, inverse variation, correlation coefficient, outlier, residual, scatter plot, standard deviation, variance  **HOTS (Questions):**  **Essential Questions:**   * Look at the height data, what are some ways you could visually display the data? (line plot, box plot, stem and leaf plot) * What statistics are used to describe the center of distribution such as heights? (median and mean) * What statistics are used to describe the spread of distribution such as heights? (range, interquartile range, MAD) * How can graphs, tables, or equations be used to predict data? | **Content Specific:**   * What is the IQR? (Interquartile range-the middle 50% of the data or the “box” in a box plot) * Which measure of center-median or mean-is involved with the IQR measure of variability? (median) * If one IQR is greater than another IQR, what do you know about the two distributions of data? (The middle 50% of the data is more variable for the data set with greater IQR.) * What is MAD? (The mean absolute deviation. The average of the absolute values of the differences between each data value and the mean.) * Which measure of center-median or mean-is involved with the MAD measure of variability? (Mean) * If one standard deviation is greater than another, what do you know about the two distributions of data? (The distribution with the greater standard deviation is more spread out than the other distribution. )   **General Terms:**   * What are the different measures of variability we have used? (range, IQR, MAD-mean absolute deviation, and standard deviation) |
| **Visuals, Materials, & Text**  **TEXT:** Thinking with Mathematical Models  **VISUALS:** Show Launch  **MATERIALS:** Lab sheet 4.4A-B, graph paper; Application 10 pg102 | **Accommodations**  **Partners, small groups, master copy of lab sheets** |
| **Wrap up/Ticket Out**   * Today I learned that standard deviation measures…the spread of a data set. The greater the S.D, the greater the spread of data. | |

**Thursday November 13, 2014**

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| **Content Standard:**  **Understand the connections between proportional relationships, lines, and linear equations.**   * 8.SP.A.1 Construct and interpret scatter plots for bivariate measurement data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association. | **ELP Standard:**  English language learners communicate information, ideas and concepts necessary for academic success in the content area of Mathematics.   * Explicit instruction of bivariate data vocabulary using tactile and virtual tools (ex: software tools, example of scatter plots). * Real world examples to reinforce bivariate data vocabulary (positive, negative, and no relationship graphs). |
| **Content Objective:**  I can demonstrate comprehension of the spread of univariate distribution by calculating the standard deviation. | **Language Objective:**  I can write to draw conclusions of standard deviation using mathematical models and a calculator. |
| * TARGET STATEMENT:   **I CAN** use knowledge of standard deviation of data using mathematical models and a calculator to complete application questions 11-13. | |
| **Key Vocabulary:**  Independent and Dependent variable, linear relationship, nonlinear relationship, x-axis, y-axis, variables, function, mathematical model, residual, slope, additive inverse, multiplicative inverse, inverse variation, correlation coefficient, outlier, residual, scatter plot, standard deviation, variance  **HOTS (Questions):**  **Essential Questions:**   * Look at the height data, what are some ways you could visually display the data? (line plot, box plot, stem and leaf plot) * What statistics are used to describe the center of distribution such as heights? (median and mean) * What statistics are used to describe the spread of distribution such as heights? (range, interquartile range, MAD) * How can graphs, tables, or equations be used to predict data? | **Content Specific:**   * What is the IQR? (Interquartile range-the middle 50% of the data or the “box” in a box plot) * Which measure of center-median or mean-is involved with the IQR measure of variability? (median) * If one IQR is greater than another IQR, what do you know about the two distributions of data? (The middle 50% of the data is more variable for the data set with greater IQR.) * What is MAD? (The mean absolute deviation. The average of the absolute values of the differences between each data value and the mean.) * Which measure of center-median or mean-is involved with the MAD measure of variability? (Mean) * If one standard deviation is greater than another, what do you know about the two distributions of data? (The distribution with the greater standard deviation is more spread out than the other distribution. )   **General Terms:**   * What are the different measures of variability we have used? (range, IQR, MAD-mean absolute deviation, and standard deviation) |
| **Visuals, Materials, & Text**  **TEXT:** Thinking with Mathematical Models  **VISUALS:** Show Launch  **MATERIALS:** Lab sheet 4.4A-B, graph paper | **Accommodations**  **Partners, small groups, master copy of lab sheets** |
| **Wrap up/Ticket Out**   * Today I learned that standard deviation measures…the spread of a data set. The greater the S.D, the greater the spread of data. | |

**Friday, November 14, 2014**

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| * **TARGET STATEMENT**   I CAN use knowledge to answer questions about linear relationships, inverse variation, correlation coefficients, and standard deviation to complete Check Up 2. |