|  |
| --- |
| **Teacher**: Dustin Berthold |
| **Date**: October 24th 2016 |
| **Subject/grade level**: Mathematics/ 8th grade Algebra Plus |
| **Materials**:  2.6 Guided Notes  Football Activity Notes  Tier 1 Notes  Tier 2 Notes  Tier 3 Notes  Cups  Bridge Paper  Books  Several Pennies  Rulers  Calculators  Dry erase markers  Smartboard  Word  Noise meter on Smartboard |
| **Standards**: [CCSS.MATH.CONTENT.HSA.CED.A.2](http://www.corestandards.org/Math/Content/HSA/CED/A/2/), [CCSS.MATH.CONTENT.HSF.IF.B.6](http://www.corestandards.org/Math/Content/HSF/IF/B/6/)  [CCSS.MATH.CONTENT.HSF.BF.A.1.C](http://www.corestandards.org/Math/Content/HSF/BF/A/1/c/), and [CCSS.MATH.CONTENT.HSF.LE.A.2](http://www.corestandards.org/Math/Content/HSF/LE/A/2/)  **Math Practices**: [CCSS.Math.Practice.MP1](http://www.corestandards.org/Math/Practice/MP1/), [CCSS.Math.Practice.MP2](http://www.corestandards.org/Math/Practice/MP2/), [CCSS.Math.Practice.MP3](http://www.corestandards.org/Math/Practice/MP3/), [CCSS.Math.Practice.MP4](http://www.corestandards.org/Math/Practice/MP4/), [CCSS.Math.Practice.MP5](http://www.corestandards.org/Math/Practice/MP5/), [CCSS.Math.Practice.MP6](http://www.corestandards.org/Math/Practice/MP6/) and [CCSS.Math.Practice.MP7](http://www.corestandards.org/Math/Practice/MP7/) |
| **Lesson Objectives**:   * I can graph to then construct the Line of Best Fit. * I can model data and justify my findings with graphs and Algebraic means. * I can reason and synthesize my own correct conclusions to address real-world questions. * I can utilize technology in a meaningful way to be more accurate in my findings. |
| **Differentiation**:  There are three tiers that students will get the opportunity of choosing from. |
| **Engagement**   1. As students enter the classroom, they will see their instructions from the warm-up on the Smartboard. As students are measuring their biceps, writing their data and revealing their data to the class, Mr. B will checking to make certain videos were watched the previous night by doing a spot check. (5 minutes). 2. Students will have the opportunity to now ask if there were any questions regarding the videos the night before as they also graph their classes’ data. (4 minutes). 3. Either together, or while conducting think-pair-shares, we will complete our 2.6 notes regarding the football activity. We will then reveal our conclusions on the board and discussing any potential lurking variables that may have affected our data. (12-15 minutes). 4. Before lunch, students will learn about the 3 tiers they may choose from based on their comfort level with the content for when they return. |
| **Exploration**:  Tier 1 is addressing any questions and revisiting content that was initiated from the flipped videos. It also looks at real world examples of gas mileage for newer vehicles and Apple’s stock prices to construct and predict future shares’ worth.  Tier 2 is our exploration and experiment phase in which students will be constructing bridges to better understand how the number of layers can impact it’s structural integrity. From this, they must contruct the line of best fit and address other structural projections. Class-wide data will be harvested to enrich the class as students have a sense of group work built with the greater population.  Tier 3 is our enrichment activity which allows students to construct our line of best fit from the football activity and compare it with our earlier findings. In addition, students will have the opportunity of discovering the line of best of Apple stock prices utilizing the more accurate calculator. |
| **Explanation**: Throughout the lesson, students will have the opportunity of justifying their thoughts as we discuss things together or while they are in their appropriate tiers.  Depending on time, the different tiers may need to get pushed into Tuesday as well. |
| **Elaboration**:  Day 2: Students will have the opportunity of discussing their findings to the class based on the tier they were predominantly in. Students may upgrade, but their elaboration will dominantly be in the one they chose. |
| **Evaluation**:  Day 2: There will be an exit slip in which the students will be asked to plot data, construct their line of best fit, address future projections and label potential items that may have affected data.  Quiz Wednesday. |