**ARC Week at Glance**

**Subject: Math Course: Advanced Algebra Concepts & Connections Grade: 10th – 12th Dates: 8/19 to 8/23**

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| **Standard(s):** AA.DSR.2 Communicate descriptive and inferential statistics by collecting, critiquing, analyzing, and interpreting real-world data. AA.DSR.2.1 Recognize the purposes of and differences among sample surveys, experiments, and observational studies; explain how randomization relates to each. AA.MM.1: Apply mathematics to real-life situations; model real-life phenomena using mathematics  **Assessment(s):  Quiz  Unit Test  Project  Lab  None** | | | | | | |
|  | **Learning Target**  **(I am learning about…)** | **Criteria for Success**  **(I can…)** | **Opening**  *(10 - 15 Mins)* | **Work-Session**  *(20 - 25 mins)* | **Closing**  *(5 - 10 mins)* | **Literacy Tasks/Focus** |
| *(Include at least one/two formatives\*in any part of the lesson as needed)* | | |
| **Monday** | I am learning how to collect and display sample data. | I can use sample statistics to make inferences about population parameters based on a random sample from a population. | Use your eyes and circle 10 words you think are representative of the varying word lengths in the Gettysburg Address. Record the words and the lengths in Table 1.1. | Complete Part I on “How Long are the Words in the Gettysburg Address?” ILP Task | Comment on the shape, center and variability of this distribution. Based on the dotplot, give a range of typical values for a sample mean using self-selected sampling. | Components of good analysis address the shape, center and spread of a distribution. Let’s share and refine our responses. |
| **Tuesday** | I am learning how to perform a simple random sample and analyzing sampling distributions. | I can use sample statistics to make inferences about population parameters based on a random sample from a population. | Do you think our method of trusting our eyes to select a sample yesterday did a good job? Why or why not? | Complete Part II on “How Long are the Words in the Gettysburg Address?” ILP Task | Jot down similarities, differences and rough equivalencies based on the data shown in our graphs from Part I and Part II | Discuss and include comparison words explicitly in your analysis.  (see closing) |
| **Wednesday** | I am learning about Normal distributions and the Empirical Rule | I can use the Empirical Rule to estimate percentiles for Normal distributions | Estimate the mean and standard deviation for Collection #1 on the Empirical Rule Task | Modeling and teacher guided practice with Collection #1 on the Empirical Rule Task | #2 on the Empirical Rule Task with a peer | Do you think the Empirical Rule applies to this distribution? Why or why not? |
| **Thursday** | I am learning about Normal distributions and the Empirical Rule | I can use the Empirical rule to determine whether data is distributed Normally | Small Groups formed and randomly assigned collection 3, 4, 5, or 6 on the Empirical Rule Task | Complete (fill-in the blanks) on the assigned collection to do analysis with your group | “Jigsaw”- each group tells class their analysis and whether they think their distribution is approximately Normal or not and why. | Do you think the Empirical Rule applies to this distribution? Why or why not? |
| **Friday** | I am learning about Normal distributions and the Empirical Rule | I can use the Empirical rule to determine whether data is distributed Normally | Formative Assessment: Complete Quick Quiz on the Empirical Rule and tell how you determined the area in each region | Discuss methodology for opener, then complete  #’s 1 – 12 on Applications with the Empirical Rule and Normal Distributions with teacher guidance. | Study-Monday’s Opener will be the Quick Quiz on the Empirical Rule for a minor (Summative) assessment grade! | How is the area under a Normal curve distributed 1, 2, and 3 standard deviations from the mean? Explain methods. |

**\*** Exit Ticket/Final Stretch Check  Electronic Tools  Dry Erase Boards – quick checks  Turn & Talk Discussion (verbal responses)  Teacher Observation – document Clipboard

Quick Write/Draw  Annotation  Extended Writing  Socratic Seminar  Jigsaw  Thinking Maps  Worked Examples  Other : \_\_\_\_\_\_\_\_\_\_\_