

## ARC Week at Glance

**Subject: Math**

**Course: Advanced Algebra Concepts & Connections**

**Grade: 10<sup>th</sup> – 12<sup>th</sup>**

**Dates: 8/19 to 8/23**

**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
			<i>(Include at least one/two formatives*in any part of the lesson as needed)</i>			
<b>Monday</b>	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.
<b>Tuesday</b>	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)
<b>Wednesday</b>	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?

<b>Thursday</b>	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?
<b>Friday</b>	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 : \_\_\_\_\_