

## 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<br>(I am learning about...)   | Criteria for Success<br>(I can...)   | Opening<br>(10 - 15 Mins)  | Work-Session<br>(20 - 25 mins)   | Closing<br>(5 - 10 mins)  | Literacy<br>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?   |

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| <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 : \_\_\_\_\_