**ARC Week at Glance**

**-Subject: Mathematics Course: Advance Algebra: Concepts & Connections Grade:** **10th – 12th Date: 8/18/2025**

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| **Standard(s):** AA.DSR.2.2 When collecting and considering data, critically evaluate ethics, privacy, potential bias, and confounding variables along with their implications for interpretation in answering a statistical investigative question. Implement strategies for organizing and preparing big data sets.  AA.DSR.2.3 Distinguish between population distributions, sample data distributions, and sampling distributions. Use sample statistics to make inferences about population parameters based on a random sample from that population and to communicate conclusions using appropriate statistical language.  **Assessment(s):  Quiz  Unit Test  Project  Lab  None** | | | |
|  | **Learning Target**  **(I am learning about…)** | **Success Criteria**  **(I can….)** | **Lesson/Activities of the Day** | **Assignments/Formative Assessment** |
| **Monday** | I am learning to distinguish between various distributions and use sample statistics to make inferences and conclusions | I can distinguish between various distributions and use sample statistics to make inferences and conclusions | Engage: Students will be presented with some discussion questions: What is the difference between a population and a sample of a population? Can we make generalizations from a sample population? Can sample populations be bias? Explain why? Students will participate in a “Think, Pair, Share.”  Explore: Students will explore the difference between population and sample population  Explain: Teacher will provide guided practice over population and sample population and explain why we use sample population in real-world scenarios  Elaborate: Teacher will explain why one is the population versus why one is a sample of a population from given scenarios  Evaluate: Teacher will provide a practice sheet over population and sample population | Practice Sheet over Population and Sample Population |
| **Tuesday** | I am learning to distinguish between various distributions and use sample statistics to make inferences and conclusions | I can distinguish between various distributions and use sample statistics to make inferences and conclusions | Engage: Students will be presented with some discussion questions: How can we represent data? Students will participate in a “Think, Pair, Share”  Explore: Students will explore the various ways that data can be represented  Explain: Teacher will provide different ways that data can be represented (mean, median, mode, standard deviation, histograms, box and whisker, dot plots)  Elaborate: Teacher will discuss how to find the mean and median. In addition, teacher will discuss how to create histograms and box and whisker plots  Evaluate: Teacher will provide a real-world scenario where students will have to find the mean and median. In addition, the students will have to construct a histogram and box and whisker plot | T.O.T.D over distributions and using sample statistics |
| **Wednesday** | I am learning to distinguish between various distributions and use sample statistics to make inferences and conclusions | I can distinguish between various distributions and use sample statistics to make inferences and conclusions | Engage: Teacher will review the real-world scenario on the board and ask the students to find the mean and median. In addition, the teacher will ask the students to create a histogram and box and whisker plot  Explore: Students will explore standard deviation and how to find the standard deviation  Explain: Teacher will discuss how standard deviation can help us make informed decisions on the data  Elaborate: Teacher will guide students on how to find the standard deviation and how to interpret standard deviation  Evaluate: Teacher will provide a practice sheet over finding and interpreting standard deviation | Practice over Finding the Standard Deviation |
| **Thursday** | I am learning to distinguish between various distributions and use sample statistics to make inferences and conclusions | I can distinguish between various distributions and use sample statistics to make inferences and conclusions | Engage: Teacher will present a scenario and ask the students to find and construct the mean, median, standard deviation, histogram and box and whisker plot  Explore: Students will interpret what the data means from informed questions  Explain: Teacher will provide Critical Analysis Task over Sample Statistics  Elaborate: Teacher will provide students will small group and 1 on 1  Evaluate: Critical Analysis Task over Sample Statistics | Critical Analysis and Various Distribution with Sample Statistics Task |
| **Friday** | I am learning to distinguish between various distributions and use sample statistics to make inferences and conclusions | I can distinguish between various distributions and use sample statistics to make inferences and conclusions | Engage: Teacher will present a scenario and ask the students to find and construct the mean, median, standard deviation, histogram and box and whisker plot  Explore: Students will interpret what the data means from informed questions  Explain: Teacher will provide Critical Analysis Task over Sample Statistics  Elaborate: Teacher will provide students will small group and 1 on 1  Evaluate: Critical Analysis Task over Sample Statistics | Critical Analysis of Data Sets and Various Distributions with Sample Statistics Task |

**\*** 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 :\_\_\_\_\_\_\_\_\_\_\_