**ARC Week at Glance**

**-Subject: Mathematics Course: Algebra Grade:**  **9-12 Date: 9/2/2025**

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| **Standard(s):** **A.MM.1: Apply mathematics to real-life situations; model real-life phenomena using mathematics.** * **A.MM.1.1: Explain applicable, mathematical problems using a mathematical model.**
* **A.MM.1.2: Create mathematical models to explain phenomena that exist in the natural sciences, social sciences, liberal arts, fine and performing arts, and/or humanities domains. A.MM.1.5: Define appropriate quantities for the purpose of descriptive modeling.**

**A.FGR.2: Construct and interpret arithmetic sequences as functions, algebraically and graphically, to model and explain real-life phenomena. Use formal notation to represent linear functions and the key characteristics of graphs of linear functions, and informally compare linear and nonlinear functions using parent graphs.** * **A.FGR.2.2: Construct and interpret the graph of a linear function that models real-life phenomena and represent key characteristics of the graph using formal notation.**
* **A.FGR.2.3 – Relate the domain and range of a linear function to its graph and, where applicable, to the quantitative relationship it describes. Use formal interval and set notation to describe the domain and range of linear functions.**
* **• A.FGR.2.4: Use function notation to build and evaluate linear functions for inputs in their domains and interpret statements that use function notation in terms of a mathematical framework.**

**quantity represented by the expression. Assessment(s):** [x]  **Quiz** [ ]  **Unit Test** [ ]  **Project** [ ]  **Lab** [ ]  **None** |
|  | **Learning Target****(I am learning about…)** | **Success Criteria****(I can….)** | **Lesson/Activities of the Day** | **Literacy Tasks/Focus** |
| **Monday** |  |  | Labor Day (School Closed) | Click or tap here to enter text. |
| **Tuesday** | I am learning how to use arithmetic sequences to describe patterns. I am learning how to identify arithmetic sequences in linear functions to describe real world phenomena. I am learning how to construct and interpret graphs of linear functions. | I can use arithmetic sequences to describe patterns. I can identify arithmetic sequences in linear functions to describe real world phenomena. I can construct and interpret graphs of linear functions. | Opening: Diagnostic Assessment/Activity* Exploring Patterns

Mini-Lesson: Art Design* Students will observe two different designs and determine how each design change over different stages.

Collaboration: (Work in pairs)* Students will work in pairs to complete the Identifying and Predicting Patterns Activity.
 | Click or tap here to enter text. |
| **Wednesday** | I am learning how to use arithmetic sequences to describe patterns. I am learning how to identify arithmetic sequences in linear functions to describe real world phenomena. I am learning how to construct and interpret graphs of linear functions. | I can use arithmetic sequences to describe patterns. I can identify arithmetic sequences in linear functions to describe real world phenomena. I can construct and interpret graphs of linear functions. | Opening: Review answers from the collaboration activity.Mini-Lesson: Students will discover the two different types of arithmetic sequences. * Explicit $a\_{n}=a\_{1}+d(n-1)$
* Recursive ($a\_{n}=a\_{n-1}+d)$

Independent Activity: Students will work independently on the activity “Ticket Sales”, where they will complete a table based on what they observe and identify the relationship between the items on the table. | Students will use math terminology to describe patterns using arithmetic sequences.  |
| **Thursday** | I am learning how to use arithmetic sequences to describe patterns. I am learning how to identify arithmetic sequences in linear functions to describe real world phenomena. I am learning how to construct and interpret graphs of linear functions. | I can use arithmetic sequences to describe patterns. I can identify arithmetic sequences in linear functions to describe real world phenomena. I can construct and interpret graphs of linear functions. | Mini-Lesson: Students will continue working independently on the activity “Ticket Sales”, where they will complete a table based on what they observe and identify the relationship between the items on the table.TOTD: Formative Assessment* Write an explicit sequence based off sequence.
* Write a recursive formula based off sequence.
* Create a linear function based off the sequence.

  | Students will use math terminology to describe patterns using arithmetic sequences.  |
| **Friday** | I am learning how to use arithmetic sequences to describe patterns. I am learning how to identify arithmetic sequences in linear functions to describe real world phenomena. I am learning how to construct and interpret graphs of linear functions. | I can use arithmetic sequences to describe patterns. I can identify arithmetic sequences in linear functions to describe real world phenomena. I can construct and interpret graphs of linear functions. | Students will complete a Arithmetic Sequence practice in Progress Learning.  | Students will use math terminology to describe patterns using arithmetic sequences.  |

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

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