**ARC Week at Glance**

**Subject: Math Course: Advanced Algebra Concepts & Connections Grade: 10th – 12th Dates: 9/22 to 9/26**

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| **Standard(s):**  AA.FGR.3 Explore and analyze structures and patterns for exponential functions.  AA.FGR.3.2 Analyze, graph, and compare exponential and logarithmic functions.  AA.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 contexts.  **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 about graphs and characteristics of exponential functions. | I can identify domain  & range, intercept(s), asymptote(s), and transformations with graphs of exponential **GROWTH** functions. | Paper Folding Hands-on Activity with the Investigating Exponential Growth and Decay Learning Task **Part I** | Teacher Models #’s 1 – 3 on “Notes for Graphing Exponential Growth & Decay” | Students complete #4 with a peer | Identify transformations (horizontal or vertical shifts, reflections and dilations) to **compare** different functions. |
| **Tuesday** | I am learning about graphs and characteristics of exponential functions. | I can identify domain  & range, intercept(s), asymptote(s), and transformations with graphs of exponential **GROWTH** functions. | Project exemplar of #4 | Complete #’s 5 – 7 on “Notes for Graphing Exponential Growth and Decay” Handout | Students complete #8 with a peer | Identify transformations (horizontal or vertical shifts, reflections and dilations) to **compare** different functions |
| **Wednesday** | I am learning about graphs and characteristics of exponential functions. | I can identify domain  & range, intercept(s), asymptote(s), and transformations with graphs of exponential **DECAY** functions. | Paper Folding Hands-on Activity for the Investigating Exponential Growth and Decay Learning Task **Part II** | Complete #’s 9 – 11 on “Notes for Graphing Exponential Growth and Decay” Handout | Students complete #12 with a peer | Identify transformations (horizontal or vertical shifts, reflections and dilations) to **compare** different functions |
| **Thursday** | I am learning about graphs and characteristics of exponential functions. | I can match functions with their transformations and important characteristics | Check # 12  Model exemplars and “Do Nots” | **Exponential Growth & Decay Sorting Cards** in small groups | Check with guidance and feedback | Identify transformations (horizontal or vertical shifts, reflections and dilations) to **compare** different functions |
| **Friday** | I am learning about graphs and characteristics of exponential functions. | I can graph and describe characteristics of exponential growth & decay functions. | Bacteria in the Swimming Pool  Part I  ILP Diagnostic | Bacteria in the Swimming Pool  Part II | Bacteria in the Swimming Pool  Part III | What patterns do you see? Can you write a function “that works”? |

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