ARC Week at Glance

Subject: Math   **Course: Advanced Algebra Concepts & Connections**   **Grade: 10ᵗʰ – 12ᵗʰ**   **Dates: 9/23 to 9/27**

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 : _____