# CAR Unit Template

## Unit Title: Algebra 1 – Linear and Exponential Modeling: Functions and Bivariate Statistics – Unit 2 -

##  Module D

**Grade level:**

**Timeframe:**

## Essential Questions

## Standards

### Standards (Taught and Assessed):

 **A.CED.A.1** Create equations and inequalities in one variable and use them to solve problems. Include equations arising from linear and quadratic functions, and simple rational and exponential functions.

 **F.BF.A.1** Write a function that describes a relationship between two quantities.

a. Determine an explicit expression, a recursive process, or steps for calculation from a context.

 **A.SSE.A.1** Interpret expressions that represent a quantity in terms of its context.

a. Interpret parts of an expression, such as terms, factors, and coefficients.

b. Interpret complicated expressions by viewing one or more of their parts as a single entity. *For example, interpret P(1+r)n as the product of P and a factor not depending on P.*

 **A.SSE.B.3** Choose and produce an equivalent form of an expression to reveal and explain properties of the quantity represented by the expression.

c. Use the properties of exponents to transform expressions for exponential functions. *For example: the expression 1.15t can be rewritten as (1.15)1/12t to reveal the approximate equivalent monthly interest rate if the annual rate is 15%.*

 **F.LE.A.2** Construct linear and exponential functions, including arithmetic and geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table).

 **F.IF.A.3** Recognize that sequences are functions, sometimes defined recursively, whose domain is a subset of the integers. *For example, the Fibonacci sequence is defined recursively by f(0) = f(1) = 1, f(n + 1) = f(n) + f(n − 1) for n ≥ 1.*

 **F.LE.B.5** Interpret the parameters in a linear or exponential function in terms of a context.

**Key**: Major Cluster Supporting Cluster Additional Cluster

### Highlighted Career Ready Practices and 21st Century Themes/Skills

### Social-Emotional Learning Competencies

## Instructional Plan

Pre-Assessment and Reflection

| **Pre-Assessment** | **Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections** |
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Student Learning Objectives (SLO), Strategies, Formative Assessment, Activities and Resources (add rows as needed)

| **SLO – WALT****We are learning to/that** | **Student Strategies** | **Formative Assessment** | **Activities and Resources** | **Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections** |
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| **A.CED.A.1. - WALT** create exponential equations and inequalities in one variable to model a problem or situation |  |  |  |  |
| **F.BF.A.1. - WALT** write a function that describes a linear relationship between two quantities |  |  |  |  |
| **F.BF.A.1. - WALT** write a function that describes an exponential relationship between two quantities |  |  |  |  |
| **F.BF.A.1. - WALT** determine an explicit expression for a function that models a linear or exponential relationship between two quantities |  |  |  |  |
| **F.BF.A.1. - WALT** determine a recursive process for a function that model a linear or exponential relationship between two quantities |  |  |  |  |
| **F.BF.A.1. - WALT** determine a set of steps for calculation for a function that models a linear of exponential relationship between two quantities |  |  |  |  |
| **A.SSE.A.1. - WALT** interpret parts of an expression, such as terms, factors, and coefficients, in context |  |  |  |  |
| **A.SSE.A.1. - WALT** interpret the meaning of a complicated expression by viewing one or more parts as a single quantity |  |  |  |  |
| **A.SSE.B.3. - WALT** use the properties of exponents to rewrite exponential expressions that define an exponential function in order to reveal information in the context of the problem or situation |  |  |  |  |
| **F.LE.A.2. - WALT** construct linear functions given a graph, a description of a relationship, or two input-output pairs (include reading these from a table) |  |  |  |  |
| **F.LE.A.2. - WALT** interpret the parameters (slope and constant term) of a linear function in terms of a context |  |  |  |  |
| **F.LE.B.5. - WALT** construct exponential functions, including geometric sequences, given a graph, a description of a relationship, or two input-output pairs (include reading these from a table) |  |  |  |  |
| **F.LE.B.5. - WALT** interpret the parameters (vertical intercept and base) of exponential function in terms of a context |  |  |  |  |
| **F.IF.A.3. - WALT** sequences are functions, sometimes defined recursively, whose domain is a subset of the integers |  |  |  |  |
| **F.LE.A.2. - WALT** construct arithmetic sequences given a graph, a description of a relationship, or two input-output pairs (include reading these from a table) |  |  |  |  |
| **F.LE.A.2. - WALT** construct geometric sequences given a graph, a description of a relationship, or two input-output pairs (include reading these from a table) |  |  |  |  |

Benchmark Assessment 1

| **Benchmark Assessment** | **Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections**  |
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Benchmark Assessment 2

| **Benchmark Assessment**  | **Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections** |
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Summative Assessments (add rows as needed)

| **Summative Assessment**  | **Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections** |
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Interdisciplinary Connections

| **Interdisciplinary Connections** | **Modifications (ELL, Special Education, Gifted, At-risk of Failure, 504) and Reflections** |
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